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BE sure to read the department of "Recent Papers" in this journal; it is in small type, and contains in a nutshell the gist of new articles in foreign journals.

80,000 copies of NEW REMEDIES were printed and issued during 1876.

EDITORIAL.

THE proposed plan of placing the future management of the United States Pharmacopœia into the hands of a Council appointed or elected, as suggested by Dr. Squibb, meets with general approval from the European Pharmaceutical and Medical Press. Indeed, to our mind, there can be no question but that it is the simplest and best solution of an important problem. If the pharmaceutical profession is content to yield to physicians the right which belongs to them, of designating the kind and the strength of remedies they desire to make use of, let us hope that, in return, the medical profession at large will take a more active interest in the Pharmacopœia—such an interest as will obliterate much of the irregularity and uncertainty which necessarily accompanies the use of unofficial and unscientific compounds. The study of therapeutics, or rather of pharmacodynamics, is beset with so many difficulties that it is absolutely necessary to eliminate all such uncertain factors as are accessible; and the only way to arrive at reliable and generally useful data, is to start from uniform premises—in this case, the officinal preparations of the Pharmacopœia.

There is, however, one obstacle which we fear will prevent the medical profession taking as prominent a part in the labor of revising the Pharmacopœia as it is desirable they should, viz.: the lack of physicians who are sufficiently familiar with the subject, and who would be willing or could afford to give the time necessary for the work.

In the days when the Pharmacopœia had its origin, a knowledge of the physical characteristics of the substances employed in medicine was much more common to physicians than it is at present. Then the custom of handling and dispensing the remedies they employed was by no means so rare as it now is among them, and this insured a certain degree of experience in pharmaceutical manipulation. Then, too, a professor of Materia Medica and Therapeutics taught the former as well as the latter, and a student, on graduating, was expected to know something of the tools he was to handle besides their names, sources, and doses. At present, however, the whole tendency of medical instruction is calculated to lessen the value placed upon a knowledge of materia medica by the student, and the system of pupilage under the guidance of our large

medical schools permits a man to enter the practice of his profession without his knowing one drug from another. On the other hand, there has grown up a generation of pharmaceutists who have cultivated and developed this feature of medical science, and have at length become almost the sole custodians of that special sort of knowledge which is essential to the construction or revision of a Pharmacopœia.

It is possible that familiarity with the Pharmacopœia on the part of the medical profession would have been greater if this work had undergone some time since the changes proposed by Dr. Squibb; but it is undeniable that there are at present many who hardly know of the existence of such a book.

One of the natural results of ignorance regarding the nature of pharmacopœial preparations already adopted has been a tendency to resort to unofficinal formulæ and preparations, and although in many instances these have been of inferior character, they have had the benefit of persistent advertising or the charm of novelty.

We shall sincerely rejoice if any plan for the reconstruction of the Pharmacopœia will render it of more interest to the physician and less strictly a guide for the pharmacist alone. To accomplish this the co-operation of wise and liberal-minded physicians is essential, and it may be that the delegation of the authority to the American Medical Association will have the effect of directing greater attention to the benefits arising from the possession of a well-arranged and comprehensive Pharmacopœia.

We disapprove in the strongest manner of the expression of such opinions as were contained in a recent letter by Mr. Rother in the Chicago *Pharmacist*, and are surprised that the editor should allow them to go without comment. Possibly, some of them were considered sufficiently absurd to serve as their own antidote. Such a claim as that medical men covet the money to be made by the publication of the Pharmacopœia, and for this reason wish to have it under the control of the American Medical Association, needs no comment; and we could almost say as much of his plan for having a National Convention for Revising the Pharmacopœia composed entirely of pharmacists, who should make a Pharmacopœia of their own, and let the doctors take care of themselves. Perhaps Mr. Rother will come, at no distant day, to the conclusion that the services of a physician for the purpose of selecting the particular pharmaceutical preparation which is adapted to the case under treatment is also superfluous. Judging by the communications which we have seen in our exchanges for some time past on the subject of "counter-prescribing," he would not be without companions.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Rheum Officinale.

On page 132 of the last volume of NEW REMEDIES, we gave a translation of Professor Flückiger's paper on the plant which has been ascertained to be the source of the Russian, or Chinese variety of rhubarb.

As we are now enabled to supplement the knowledge of rhubarb by the reports of Lieut.-Col. Przewalski, we embrace the opportunity of giving an illustration of the plant, taken from Flückiger's paper and republished in the *Proceedings of the Amer. Pharm. Association.*

Professor Flückiger, having had an opportunity for observing the growth of the plant, says that "the flower stems attained nearly their full height from the 20th to the 25th of May, and were in full bloom on the 9th of June; the flower withered on the 26th of June, and the stems had then attained their full size, 2½ metres. Most of the little fruits were ripe by the 20th of July, but their number was small compared with the quantity of flowers. Neither the flowers or fruits were distinguishable from those of other species of rheum. The author has carefully examined the roots of rheum officinale cultivated by himself; some that had been cultivated in the garden of the École Supérieure de Pharmacie de Paris, and some that had been cultivated and carefully prepared by Messrs. Rufus Usher & Sons, of Oxfordshire, in the manner in which they prepare their well-known rhubarb for commerce, and he arrives at the conclusion that the root of *Rheum officinale*, Baillon, undoubtedly possesses the characteristics of Chinese rhubarb.

The Russian government, at the request of the Russian Geographical Society, in 1870, dispatched a scientific mission to Northern China, to explore the regions lying outside of the great wall. Although the expedition had to contend against the greatest difficulties, and was but very scantily provided either with funds or apparatus, it nevertheless accomplished great results, and returned in 1873 with rich collections. Przewalski's report has been published, and contains among other highly interesting matters an account of rhubarb cultivation, accompanied by two illustrations, which differ somewhat from that given by Flückiger, and are intended to represent *Rheum palmatum.* Przewalski's account is as follows:

The rhubarb-plant has three to four large, dark-green, palmately-lobed leaves, growing from the root; the largest leaf which we found was 63 centimetres (24.8 inch.) long, and 1 metre (39.37 inch.) wide. Between these leaves the flower-stalk rises to a height of 2.20 to 3.16 metres (98 inch. to 124 inch.); its diameter reaches 4 centimetres (1.57 inch.). These are the dimensions of a full-grown plant. Very old plants have sometimes ten or even more leaves, but in this case they have several flower-stalks, one of which generally belongs to a set of three or four leaves. The petiole has an oval shape, as shown by a cross-section, and is about of the thickness of a finger; sometimes it reaches a length of 68 cm. (26.77 inch.). It is greenish below, reddish above, and is covered all over with reddish stripes, which, are 3 to 5 millimetres (0.118 to 0.197 inch.) in length. The flower-stalk has several nodes bearing smaller leaves, and the small white flowers are

Rheum Officinale (*Baillon*).*

* From the Transactions of the Am. Pharm. Assoc.

situated upon separate pedicels. The root is oblong and provided with short thin radicles, which in all specimens examined, numbered 25. The largest of these radicles are 55 cm. (21.6 inch.) long, and have, at the point of coalescence with the main-root, a thickness of 4 cm. (1.57 inch.). The development of these secondary roots, however, depends entirely upon the age of the plant. A full-grown root has a length of 32 cm. (12.60 inch.), rarely more, and is covered with a rough brown epidermis, which is removed after the root is dried.

The flowering season of rhubarb falls in the end of June and beginning of July. Exceptionally, plants are met with which flower a little sooner or later. The seeds ripen in the latter half of August.

According to the statements of the natives, rhubarb has no medical properties, except when dug up in spring or autumn; during the flowering season in summer it is said to be spongy, which statement, however, is not confirmed by our experience. The chief harvest of rhubarb is made by the Tangutes, and partially also by Chinese during September and October. Since the outbreak of the revolt of the Dunganes, however, the production has been considerably reduced, and in some districts has been entirely suspended. In former times the collection of rhubarb was carried on with so much eagerness, that only such plants, as grew in inaccessible places, were safe from eradication; else the plant would perhaps be entirely extinct at the present time. In the mountains near the monastery Tshertynton,* it is found very rarely; but it is said to be very common farther west, near the head-waters of the Tetung-gol and Etzsyn-gol, where the chief bulk of rhubarb was formerly collected and carried to Sining, which latter city is still the chief emporium of rhubarb. While I was at Tjan-dsin, the price of rhubarb at Sining was 1 lan of silver for 1 hin (about 20 cents per pound). In Russia the usual price is 3 to 5 roubles per pound.†

The drug is carried from Sining during the winter on the backs of animals, and during summer on boats upon the river Chuan-che to Peking, Tjan-dsin and other Chinese ports, and there sold to Europeans. Here the price is already six or ten times higher than at Sining. In former years the principal bulk of rhubarb went from Sining to Kiachta; but since the revolt of the Dunganes this route has been closed, although at present it might without difficulty be reopened, owing to the complete suppression of the insurrection. It would only be necessary to send once a caravan from Kiachta to Sining, or at least to Nin-sya; but ten to fifteen well-armed guards would be necessary for its protection.

When rhubarb is to be dried, the secondary roots are cut off, and the main-roots are peeled. The thickest part of the root is then split, cut into pieces, strung upon cords and suspended in an airy place, generally under the roof of a shed. This manner of drying is said to be necessary, as sunlight is supposed to be injurious to the roots. The larger rootlets are, however, not thrown away, but are treated like the main-roots, and sold with them.

In the Gan-su (Kan-su) mountains the officinal rhubarb is found growing not only at the bottom of the deepest ravines and valleys, but even as high up as the upper forest limits, or to a height of about 3,150 metres over the sea. Occasionally it is met with in still higher locations, but it is always found to grow in hollows with damp, rich soil, and mostly on slopes having a northern aspect. Very rarely it is found on southern slopes, and still more rarely in places devoid of trees.

In those districts which I have visited, the Tangutes cultivate the rhubarb in their gardens near their own dwellings, raising it either from the seeds, or by transplanting young wild plants. The seed may be planted in autumn or in the beginning of spring; but it must be placed into a fine-grained, clean, and damp soil. The natives state, that the root reaches the thickness of a fist in about three years, but does not attain its full size before its eighth or tenth year, and even later. The amount of cultivated rhubarb is, however, quite inconsiderable, and is only intended for domestic use, as medicine for themselves and their cattle. The natives of all districts, which I have visited, assured me, that rhubarb is nowhere cultivated on a large scale.

A close investigation of the physical conditions, under which rhubarb grows, has convinced me, that its cultivation could be carried on with success in many portions of Russia, as in the Amoor-district, in the Baikal- and Ural-mountains, and in the Caucasus. I have brought home a large number of seeds, which have been delivered to the Imperial botanic gardens.

According to the natives, rhubarb is not only found in the mountain chains to the north of the Kuku-nor lake, but also to the south of it, as far as the snow-clad ridges south of Sining, and in the Ograi-ula chain near the sources of the Yellow River. Whether it is also found in the mountainous parts of the province of Sy-Achan, I could not ascertain with certainty; but *in the hills of northern Thibet* which are destitute of forests, *the officinal rhubarb does not occur*. According to all the information, which I could gather, its growth is confined to the alpine region about the Kuku-nor lake and the sources of the Yellow River.

Besides the officinal rhubarb, another species is found in the mountains of Gan-su (Kan-su), namely, *Rheum spiciforme*. This grows exclusively in alpine regions, has thin, branching roots, which often reach a length of 1.30 metres (51 inch.) and are devoid of medicinal properties. This species is found also in the Himalaya, in Tan-

* 37° N. and 101° 40′ E. from Greenwich.

† 1 Lan or Liang is generally identical with Tael (=$1.43); but in Central and Western China it is somewhat less than an English shilling. It is only an imaginary coin. 1 Hin or Yin is properly 583.426 grammes. A rouble is 77.164 cents.

Azor Thurston

shan, and in the deserts of northern Thibet. The Tangutes name this species *Sar-tchüm*, the Mongols, *Kurma-sharamoto*, while the Tangutic name for true rhubarb is *Djum-tsa*, the Mongolian, *Sharamoto*, or "yellow wood." *

A Simple Suction and Pressure Apparatus.

MR. C. BULK recommends a simple apparatus, which may be used either for suction or for pressure, and which may be regarded as a modification of those proposed by Christiansen,† Arzberger, and Zulkowsky.‡ It consists of a glass tube *a*, constricted by being drawn out near its upper third and containing a smaller trumpet-shaped tube *b*, reaching to the narrow part, (as may be seen in the figure,) and joined at *c* with the lateral tube *d*. A stream of water flowing through the latter (*d*), after passing through the constriction, being compelled to expand in the wider portion of the tube, will diminish in rapidity and will therefore draw air from the tube *b*. If the tube *a* were straight, however, the current of water would soon begin to rotate and become interrupted, in which case it would attract but little air. This is obviated by the bending of the tube *a* (Fig. 1), or else by blowing a lateral hole into the tube (Fig. 2, bottom of *a*), whereby all rotation of the current of water is prevented. This small apparatus is so powerful, that with a pressure of water equivalent to a column of 10 metres in height, it will lift 720 millimetres of mercury, and aspirate one-half litre of air each minute. But even with a small pressure of water it works satisfactorily, and forms an excellent aspirator for rapid filtration, as it may be used upon any portion of the work-table and be connected with the water- and waste-pipes by suitable india-rubber tubing.

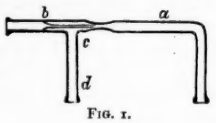


FIG. 1.

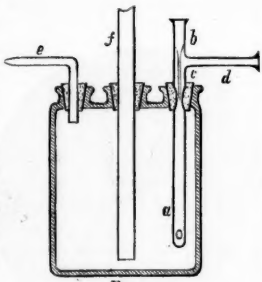


FIG. 2.

The air which is aspirated by this apparatus may be converted into a stream of compressed air. For this purpose the exit portion of the suction apparatus is passed through one of the necks of a three-necked Woulff's bottle (Fig. 2), which carries in the others a small glass-tube *e* drawn to a point, and a safety tube *f*. On allowing a current of water to enter the bottle through *a*, air is drawn in from *b*, and is expelled at *e* under pressure, the amount of which depends on the height of *f*. Should compressed air become unnecessary, *e* may be closed and the safety tube *f* be connected with a pipe passing downwards; the suction power of the apparatus is thereby increased. —*Ber. d. D. Chem. Ges.*, 1876, 1871.

The Sources of our Drug Supply.

AN American correspondent of the *Chemist and Druggist*, speaking of the paucity of the medicinal products of this country as compared with our other vegetable and mineral productions, remarks that we are dependent upon foreign lands for our medicinal drugs, as well as for the greater portion of the vast quantities of our chemicals for use in the various industries of the country. "We have no alkaline products of consequence—these are imported to the amount of millions from England: of bark for quinine manufacture and opium for morphia and laudanum, we are destitute. Resinous gums are entirely derived from Oriental lands. Madagascar and other places in the same latitudes supply us with the copal and other gums suitable for varnish manufacture. The larger portion of our dyes and dye-woods are of foreign derivation, viz., indigo, lac dye, logwood, fustic, and other similar woods; brimstone and sumac are from Sicily. All the essential oils for perfumery are imported; cream of tartar from Marseilles and Trieste. The spices—cinnamon, cloves, mace, etc.—are from the East. Rhubarb, senna, scammony, cubebs, ipecacuanha, jalap, and licorice are unobtainable at home; and aloes, anatto, copaiba, camphor, cardamoms, gamboge, myrrh, manna, nutgalls, and many other items which could be mentioned, are of foreign growth. We are producers of a few vegetable drugs, but only a few—ginseng, largely exported to China, and by that peculiar people held, it is said, in especial reverence; oils of wintergreen, peppermint, sassafras, spruce, and a few others; beeswax, saffron, sassafras bark, Carragheen moss, and of late years borax and quicksilver. In oils and paints we are lacking olive oil, and to a considerable extent castor and linseed oils, the local production of these two latter being a quite inadequate supply; with cotton-seed oil we can and do supply the world, and perhaps much of it comes back to us rechristened.

"For chalk we are an extensive customer to Albion; vermilion we get from the Chinese; red ochre from Newcastle, and yellow from Rochelle.

"Thus it appears that while our prolific production of the great staples of existence goes on augmenting from year to year in a wonderful manner, we are stipendiary to other lands for the great medical necessities and for many also used in the arts and manufactures. Owing to climatic influences this must always be so, and I shall have sufficiently accomplished my purpose in writing this letter if I have succeeded in setting forth, more

* The Thibetan name for rhubarb is *chhu-rtsa*. The Hindus do not seem to have been acquainted with it, except in modern times, as there is no Sanskrit term for it, and the only terms in use in India are of modern origin, viz.: *revasam* or *revâchinî* in Mahratti, and *râwand-i-chînî*, or *rêwend-i-chînî* in Hindi.

† *Poggendorff's Annalen*, 146, 155.

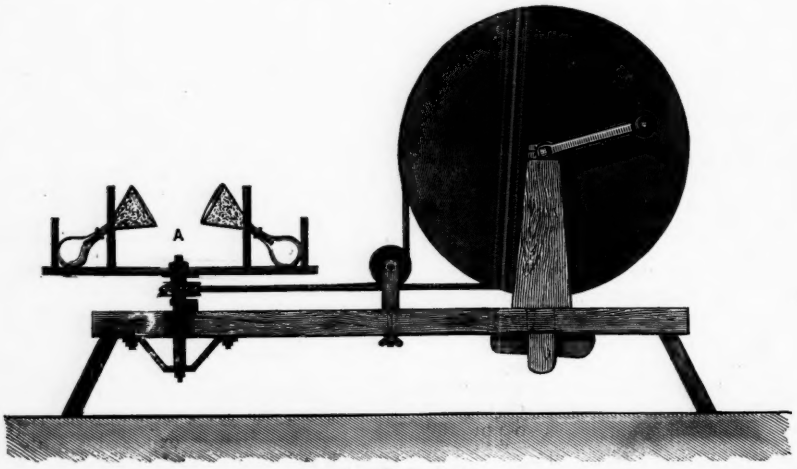
‡ *Ann. d. Chem. u. Pharm.*, 176, 327.

clearly than dry statistical tables do, the dependency of the American States on commercial centres of Europe, and on all the remote produce markets of the world."

Centrifugal Drying-Machine.

ALL needle-shaped crystals are apt to retain large quantities of mother-water in their interstices, and their purification, by means of repeated solution and crystallization, often causes serious losses. If the mother-liquor is allowed to remain in the salt, on drying it is carried towards the exterior of the mass by capillary attraction, and often imparts color to it. The removal of this mother-water may be imperfectly accomplished by various means, such as drying upon tiles, upon filtering paper, etc. But in most cases it is necessary to recover the absorbed solution by renewed exhaustion, which only multiplies the processes. Manufacturers on a large scale have long been in the habit of using specially constructed centrifugal machines for removing this mother-water, and the construction of these apparatuses as used in sugar-houses, epsom-salt works, etc., are probably known to all of our readers. Less known, however, is perhaps the simple apparatus which we are about to describe, and the illustration of which has been taken from *Mohr's Lehrbuch der Pharm. Technik.* The construction is exceedingly simple and intelligible without detailed description. The spindle at *A* carries a horizontal board or rotator provided with four upright pieces, the two inner ones of which contain an oblique tapering hole, into which the funnels may be firmly wedged in such a position, that the lower sides of the funnels lie in a horizontal line. It is best to use two equally heavy funnels and receivers, exclusively intended for this apparatus. The external uprights are intended merely as supports to the receiver. The cord which transmits the motion from the fly-wheel to the rotator should not be too thin, and at the same time somewhat elastic. A rubber-cord probably answers best.

When using the apparatus, the necks of the funnels are loosely closed with cotton, and enough of the crystals (previously drained by inclining the crystallizing dish) is placed into them. The orifice of the funnels may be covered with paper. Everything being in position, the wheel is set in motion, first gradually, then more rapidly, and after continuing some time, the motion is again gradually diminished. The expelled mother-liquid may now be emptied, and the operation repeated until no more liquid collects in the receivers. The crystals are then removed from the funnels, and exposed to the air for a few hours, when they are ready to be bottled. The funnels are of course again charged, until the whole of the crystals have been desiccated. This is the best method to obtain very pure crystals with the least amount of labor or solvents. The products generally are exceedingly handsome and but very little substance is lost. Mohr recommends the following dimensions as most suitable for pharmaceutical laboratories, calculated for funnels of four inches aperture: diameter of fly-wheel 19 inches, small wheels 2 inches; distance between inner uprights of rotator 10 inches.



Centrifugal Drying-Machine.

Analyses of Hair Dyes.

THE London *Lancet* had recently twenty-one "hair restorers," and "hair dyes," analyzed. Out of the twenty-one examples examined, no less than fourteen were practically identical in their nature. They contained sulphur in suspension, and also lead in varying, but always in very considerable quantity. Three of these preparations bore American labels, the rest were English. The descriptions varied a good deal. Only one was plainly described on the label as poisonous if

taken internally, while many were described as "perfectly harmless," "free from injurious substances," and so on. The prices varied from 25 cents to $1.50 per bottle.

Two more samples, one of them American, were found to contain lead and sulphur, but in a different form; the sulphur was present as hyposulphite, and, in fact, these preparations may be substantially imitated by adding hyposulphite of soda to a solution of a lead salt. A white precipitate first appears, which dissolves in excess, and the solution so obtained *does not give a precipitate with iodide of potassium.* This is noteworthy because in the handbill which accompanies one of the samples purchasers are warned against the dangerous hair preparations which contain lead, as likely to lead to paralysis of the brain and insanity, and are directed to test all preparations with *iodide of potassium.*

In another sample, an American one, no free or loosely-combined sulphur was found, but only lead, in considerable quantity.

Another of the preparations was contained in two bottles; in one of which ammonio-nitrate of silver, and in the other the pyrogallic acid, was detected. This therefore, belongs to an entirely different class from the preceding.

The remaining three preparations analyzed were intended for lightening instead of darkening the color of the hair. No substantial difference between these samples was detected. Each was found to contain a tolerably concentrated and slightly acidulated solution of peroxide of hydrogen. It is well known that this is the active agent in preparations of this kind. It can hardly be considered as poisonous, but its action on the hair is said to be injurious.

Recognition of Oil of Turpentine in other Essential Oils.

A NOVEL, and as the author appropriately calls it, somewhat primitive method has been devised by Callet for recognizing the presence of oil of turpentine in other essential oils. It is based upon the well-known fact that turpentine, either taken internally or inhaled, communicates to the urine a very marked odor of violets. The author has ascertained that no other essential oils, not even those of lemon, bergamot or peppermint, produce such an effect, and that the presence of other oils does not mask the characteristic odor produced by turpentine. As it may happen, by way of exception, that in certain persons the absorption of turpentine or its elimination by the kidneys may be imperfect, he recommends to make a preliminary trial with a few drops of pure oil of turpentine at least 24 hours previous to making the trial with an essential oil.—*Schweiz. Woch. f. Ph.*, 1877, 21.

Metric Doses of Alkaloids.*

FOR convenience and easy recollection these may be divided into two classes, one of which is prescribed only by *milligrammes* or fractions thereof, while the other is prescribed by *centigrammes.*

I.—DOSE BY MILLIGRAMMES.

	Maximum Dose in 24 hours.
Atropine	0.001 to 0.004
Atropine, sulphate	0.001 " 0.004
Digitaline	0.002 " 0.010
Coniïne	0.001 " 0.003
Aconitine, cryst. (of Duquesnel)	" $\frac{1}{4}$
every 4 hours, up to	" 0.002
Eserine	$\frac{1}{4}$ " 0.002
Hyoscyamine	0.002 " 0.005
Daturine	$\frac{1}{2}$ " 0.003
Curarine	$\frac{1}{4}$ " 0.002
Nicotine	$\frac{1}{4}$ " 0.002

II.—DOSE BY CENTIGRAMMES.

	Single Dose.	Maximum Dose in 24 hours.
Morphine and its salts	0.01	0.10
Codeïne	0.02	0.10
Narceine	0.03	0.15
Veratrine	0.01	0.03
Strychnine and its salts	0.01	0.03
Santonine	0.10	0.50
Quinine	0.25	1.00

* For obvious reasons we have made the termination of all the names alike, namely—ine, instead of ia, which we otherwise prefer for true alkaloids.

Note on a Piper, called Jaborandi, in the Province of Rio Janeiro.*

BY A. GUBLER.

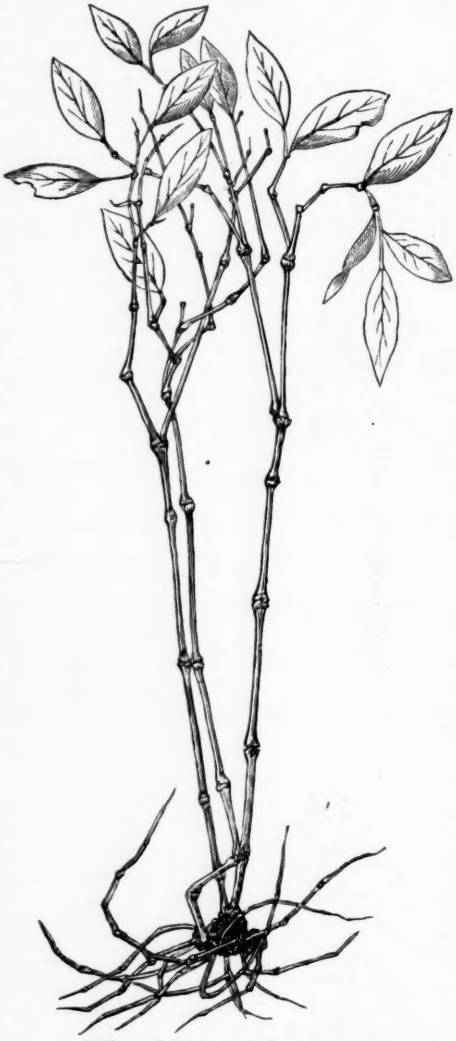
BESIDES the jaborandi of Dr. Coutinho (*Pilocarpus pennatifolius*), the sialogogue and sudorific properties of which are so remarkable, there exists in Brazil, as is known, a large number of plants bearing the same popular name, which are used against the bites of serpents, etc. All the botanical species, however, are included in two families, Rutaceæ and Piperaceæ. Among the latter, *Piper citrifolium* and *Piper reticulatum* have been mentioned as particularly efficacious. A jaborandi from the province of Rio Janeiro, which has been the subject of a note in the *Journal de Thérapeutique* for November 25, by Professor Gubler, appears to be referable to either of these species, which perhaps should be combined in one.

The plant is a shrub, usually attaining, but sometimes considerably exceeding, a metre in height. The stems are fasciculated at the base, simple, and denuded for half their length, cylindrical, very straight, and articulated like the bamboo; towards the top they bear dark green leaves that are alternate, shortly petiolate, oval-lanceolate or slightly obtuse. In the axils of these are sometimes found catkins of male flowers. The figure of the plant is from a sketch drawn by Dr. Jules Crevaux, and originally appeared in the *Journal de Thérapeutique.* A supply of the plant, collected by Dr. Da Veiga, of the Brazilian navy,

* *Journal de Pharmacie et de Chimie* [4], vol. xxv, p. 128.

accompanied the sketch, and has been investigated chemically, physiologically, and therapeutically.

According to Professor Gubler, the entire plant exhales a slightly aromatic odor, which becomes more pronounced upon bruising the leaves between the fingers. When chewed the taste is at first slightly acid, then warm and aromatic, and finally very piquant, and comparable to that of pyrethrum root. This taste is met with in the stems, and especially in the roots, where it attains a high degree of intensity, chiefly in the moderately large portions, about the size of a crow quill, which are externally of a rather decided gray color. The more slender and whitish portions are rather insipid, and the finest have hardly any taste at all. These differences are dependent upon the constitution and thickness of the cortical layer, which appears to be the seat of the active principle.



A Piper called Jaborandi (*P. reticulatum*).

When a picked fragment of the root is chewed, at first no sensation is produced on the palate; the prickling is first manifested at a short interval after the vegetable tissue becomes impregnated with saliva. It would appear that the active principle of the drug does not exist ready formed in the plant, but is due to a special fermentation in the presence of water, similar to that which sets free oil of bitter almonds or oil of mustard. When once manifested, the piquancy rapidly acquires great energy, being accompanied by painful shootings and vibratory tremblings of the tongue and lips, as though these organs were traversed by an electric discharge. At the same time a very active secretion of all the buccal glands becomes developed, and especially an extraordinarily abundant salivation. These phenomena persist for a few moments after the sapid pulp has been rejected, but then decrease and disappear, leaving a sensation of freshness and a certain degree of anæsthesia of the palate. After a few minutes, however, all the parts return to their normal state.

Upon swallowing the saliva charged with the active principle, an impression of heat is produced at the back of the throat, which extends to the œsophagus and stomach, where it gives rise to a sensation resembling hunger.

The chemical composition has been studied by M. Hardy, who, in some preliminary experiments with infusions, was able to demonstrate the presence of an alkaloid.

Some leaves and stalks were therefore powdered, and left to macerate for four days with three times their weight of 90° alcohol acidulated with eight grammes of hydrochloric acid per litre. The alcohol was then decanted and fresh alcohol added, and this was repeated three times. The alcoholic solutions were concentrated by distillation, and the aqueous solution evaporated and decomposed by ammonia in the presence of excess of chloroform. Upon evaporation of the chloroform the base was left free, but still impure. It was therefore treated with water acidulated with hydrochloric acid, which dissolved the major part of it; the solution was filtered, evaporated, and again decomposed by ammonia in the presence of excess of chloroform. Upon evaporation of the chloroform solution the base was deposited, having a crystalline appearance and slightly yellowish tint. The base presents the characteristic reactions of alkaloids; its solution gives a white precipitate with iodide of mercury and potassium, and with iodine in iodide of potassium. Another portion of the leaves was distilled with water to obtain the volatile oil, but only a small quantity was collected, insufficient for investigation.

The alkaloid dissolved easily in water slightly acidulated with hydrochloric acid, and such a solution was used by Dr. Bochefontaine to study its physiological action upon animals. He found that it did not act upon the heart or influence the muscular contractility; it was not a convulsivant.

It appeared to have the power to prevent the mechanical or electric excitations of the mixed nerves, such as the sciatic, from being transmitted to the muscles. It appeared even to possess the paralyzing power at the outset, and this property would seem to distinguish it from curare. Indeed, the paralyzing action of curare is usually preceded by some slight spasmodic movements, which have not been observed in frogs poisoned with the alkaloid of false jaborandi.

Professor Gubler remarks that the effects observed after the administration of the plant to the human subject, although in small doses, had not led him to expect so violent an action from the alkaloid of the Rio piper. The first experiment, in 1875, with the comparatively fresh plant, did not reveal any great activity compared with the excessive power of *Pilocarpus pennatifolius*. Besides the peppery sensation in the mouth and throat, and the heat in the stomach, doses of four to six grammes of the leaves in infusion only caused slight salivation and diaphoresis. More recent experiments have been still less fruitful. In a case of acute albuminous nephritis its effects were absolutely *nil;* whilst in the same patient, on the following day, an infusion of four grains of *Pilocarpus* jaborandi in 200 grammes of water caused abundant salivation and sweating, and an increased excretion of urine.

From these negative facts Professor Gubler draws the following conclusions:

(1.) That there exists a striking difference between the mode of action of *Pilocarpus pennatifolius* and *Piper reticulatum*. With an insignificant topical action the *Pilocarpus* manifests a diffused action of great energy; the second, although very aggressive to the organs at the entrance to the primæ viæ, appears to be nearly inert when it once enters the circulation.

(2.) That this inertia of the piper is more apparent than real, and due to the insufficiency of the doses of the leaves, or, better still, of the root, to obtain physiological effects.

But if the alkaloid discovered by Mr. Hardy is a certain test of the efficacy of the *Piper reticulatum*, the experiments of M. Bochefontaine show that it will be advisable not to seek to obtain the first manifestations through the secretions, as the new agent is a poison of the motor system closely allied to curare.—*Pharmaceutical Journal and Transactions.*

Lac Ferri.

THIS mixture, which is used in Europe and has received its name from its resemblance to milk, consists of freshly precipitated ferric phosphate suspended in water. It is prepared by precipitating ferric chloride with sodium phosphate in very dilute solution, washing the precipitate and mixing it with water, so that 100 parts of the mixture contain 1 to 1.2 parts of ferric phosphate. The last traces of free acid may be removed, during the washing, by a small quantity of sodium carbonate; at all events, every trace of free acid must be removed. The precipitation may also be accomplished in neutral solution, by adding to the sodic phosphate an equivalent of sodium carbonate; but in this case the precipitate is less white, probably owing to the deposition of a small quantity of hydrated ferric oxide. The first-mentioned process of course produces a loss of a portion of ferric phosphate, which, however, is of no importance, in view of the cheapness of the ingredients. The amount of ferric phosphate is easily ascertained by evaporating a sample portion, after which the bulk of the mixture may easily be adjusted to the above-named strength.—*Pharm. Zeit.*, 1877, No. 7.

Phyllocyanin as a Reagent.

THE blue coloring matter of flowers, *phyllocyanin*, is extremely sensitive to minute traces of free alkali, and although the blue solution cannot be preserved, yet when a small quantity of sulphuric acid is added, the red solution thus produced may be kept for a long time without undergoing alteration. The quantity of acid added should not be so large as to give a distinct red color, but merely enough to change it to a dark purple, intermediate between the blue and red. In this state it is capable of showing distinctly the alkaline reaction caused by the presence of ammonia in rain-water, or by the plumbic hydrate in water which has been in contact with metallic lead. Added to a solution of one part of potassium hydrate, in 1,200,000 parts of water, it produces a permanent *blue* color, whilst with a solution in 200,000 parts of water a permanent *green* is obtained. It is therefore a much more delicate test than litmus, which scarcely gives any reaction with the last-mentioned solution.

Paper prepared with a solution of phyllocyanin must be kept in well-closed bottles; for although unaffected in a vacuum, or by air which has been exposed over sulphuric acid, yet when it is exposed freely to the air, the ammonia present in it turns the color blue.

The phyllocyanin is best obtained from the iris, the violet, or the purple verbena, by treating the petals with a small quantity of warm water; sulphuric acid is then added until it assumes a purple color, and the solution is preserved in a closed vessel excluded from the light.—G. PELLAGRI, *in Gaz. chim. Ital.*, vi., 35.

An Improved Bromine-Still.

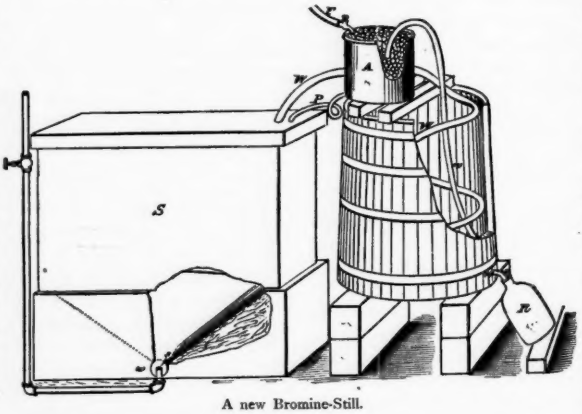
MR. W. ARVINE of Hartford City, W. Va., has devised a new apparatus, the object of which is to economize the material used in the manufacture of bromine by saving a portion of the oil of vitriol and manganese or alkaline chlorate, and by dispensing with the caustic alkali heretofore employed for absorbing the vapors and gases that escape uncondensed from the worms.

S is the still proper, wherein the bromine is generated by the usual methods.

This still may be made of any of the materials

commonly used for the purpose, such as stone, terra-cotta, pottery ware, or lead; but this still has a funnel-shaped bottom or floor, in the form of an inverted cone, which may be more or less broad in proportion to its depth, according to the nature of materials used.

The apex of this funnel or cone is provided with two perforations; *s* for the admission of steam, and *w* for the withdrawal of the waste or exhausted materials. This still is provided with the condensing worm *W*, which is surrounded with cold water while in use, and the receiver *R* is also provided with a worm, *w*, which serves for additional condensing surface, and an outlet for the uncondensed gases and vapors of chlorine, chloride of bromine, air, etc., which escape in considerable quantity from the worm and receiver. The second worm, *w*, continues to the absorber *A*, which is preferably a stone or earthen jar of such size in relation to the still as experience would show to be necessary. Usually about one-twentieth the capacity or size of the still will suffice for the absorber.



A new Bromine-Still.

The jar *A* is filled with suitable material such as coke, fragments, or pieces of stone, pottery, glass, or any convenient material, which, in a dry or moist state, may present sufficient and proper surface for the condensation and absorption desired. The small pipe shown in the drawing, and terminating in the faucet *F*, serves to convey bittern or other suitable liquid for absorbing the vapors and gases from the worm *w*, and conveying them back to the still *S*, by the curved pipe *P*.

By this arrangement of still, the offensive gases and vapors which usually escape into the air are entirely absorbed and saved, and the air is allowed to escape freely from the top of the absorber. As the chlorine and chloride of bromine serve to liberate bromine from its natural combinations, their complete return to the still increases the amount of bromine obtained, and lessens the amount of manganese, or alkaline chlorate, and vitriol usually required, while the conical bottom of the still is easily rinsed clean with water, or is cleansed from sediment by the rapid withdrawal of the exhausted liquors.

The steam used in heating and agitating the contents of the still is most advantageously admitted at *s*, since it will only stir up the manganese and oil of vitriol sufficiently when admitted under the charge.

It has been customary in bromine making to introduce the pipe *w* into a dish containing a strong solution of caustic soda, which, when nearly saturated with chlorine, bromine, etc., was then transferred to the still, and sufficient vitriol and manganese added to liberate its bromine. In this method only a portion of the gases was absorbed, and the remainder escaped into the air, to the annoyance of the workmen and neighborhood, and to the loss of the manufacturer. In this arrangement the use of caustic alkali is dispensed with, and all the objections and disadvantages connected with its use, such as odor, chemicals used to decompose it, and loss of chlorine, are fully overcome, while the pressure exerted upon the still by the dipping of this waste-pipe, *w*, into the caustic solution is entirely removed by the arrangement herein described.—*Scient. Amer. Suppl.*

Leaves of the Button-Snake Root.

An extensive demand for the dry leaves of the button-snake root (*Liatris odoratissima*) has arisen among perfumers and tobacconists in the United States, and a subscriber of the *Chemist and Druggist* gives the following particulars regarding it. The "wild vanilla," as it is commonly called, and more vulgarly "hound's" tongue or deer tongue, is found in East and South Florida, and portions of lower Georgia. It grows abundantly on the edges of what are called "bays," *i.e.*, low, swampy places in the pine woods, which are partially grown over with bays (a species of magnolia.) The odor of the leaves strongly resembles the real vanilla. Most of the species of *Liatris* or button-snake root have a tuber-like root and long straight stems, upon which the numerous flower-heads are crowded in a close spike. A number of these are cultivated as ornamental plants. In *L. odoratissima* the lower leaves are from eight to twelve inches long, by two to three broad; the upper ones very small. The stem divides above into a broad branching panicle of purple flowers, which makes the plant a very attractive one. The fresh leaf has, when crushed, a disagreeable odor, but when pulled from the plant and dried in the shade for a day or so, it becomes highly fragrant, having a smell resembling vanilla or tonka bean, and similar to the sweet-scented vernal grass, but much stronger. This odor is developed by some chemical change made in the leaf during the process of drying, whereby the peculiar principle known as coumarine is formed.

Coumarine is found abundantly in the tonka bean of commerce, but so abundant is it in the liatris that it is often found in large quantities on the upper portions of a mass of the semi-dried leaves. It is readily sublimed by a low degree of heat (150°), and the heat generated in these masses or bundles is sufficient to sublime it on the upper or cooler layer. When found in this way, coumarine is composed of snow-white, needle-shaped crystals, exceedingly fragrant, the leaf looking as though it had been out all night in cold, frosty weather.

The dried leaves, as before mentioned, furnish an article of commerce, and one that is steadily growing in importance. They are gathered principally on the St. John's River and its tributaries by the poorer people, and sold by them in small lots to the country storekeeper in exchange for goods; by these latter they are sent to the balers and packers, who forward them to New York for home use and exportation. Pilatka, on the St. John's River, is the headquarters of the trade. One may often see 75 or 100 bales of 200 lbs. each lying on the wharves awaiting shipment. One dealer at this place has received an order for as large a quantity as 150,000 lbs. Adults can gather from 150 to 400 lbs. of the green leaves in a day; active boys and girls nearly as much. The green leaves are taken home and dried in the shade, and lose about 80 or 85 per cent. in weight; they are then sold for from three to six cents per lb., yielding quite a good return for the laborer. The packer bales and ships, and realizes from eight to twelve and a half cents per lb. The dried leaves are used to give a flavor to cigars, snuff, and smoking tobacco. For cigars it is sufficient to place the leaves and cigars in alternate layers in a box, and allow the whole to remain together for several days; for snuff the leaves are dried, ground and mixed; they are mixed with smoking tobacco after being shredded up or granulated. A small quantity is sufficient to flavor a large mass of tobacco. Their odor is given off much more intensely on a damp day than on a dry one. Although large quantities of these leaves are consumed in America, a much larger quantity is shipped to France and Germany, where they are rapidly growing in favor. It is quite probable they will soon be used much more extensively by perfumers, and as they are known to keep the "wicked moth away," they may usefully replace the strong-smelling camphor and tobacco-stems.

[King speaks of the varieties of Liatris as being celebrated for their alexipharmic powers in bites of venomous snakes. Puss states, that when bitten, the inhabitants of the Southern States bruise the bulbous roots and apply them to the wound, at the same time drinking freely of a decoction of them in milk. This, however, says King, requires confirmation. These plants are diuretic, with tonic, stimulant, and emmenagogue properties. A decoction of them is very efficacious in gonorrhœa, gleet, and nephritic diseases, in doses of from two to four fluid ounces, three or four times a day.

It has also been recommended for use as an injection in leucorrhœa, and as a gargle in sore throat.]

Extract of Rennet.

THE fact, that liquid rennet is liable to deterioration by long keeping, has been known for some time, and confirmed by the investigations of Hamarsten.* The preparation of small quantities of it, however, from fresh calves' stomachs offers so many inconveniences, that most apothecaries prefer to purchase their supply from manufacturers, although the activity of the preparation varies considerably with its age. The manufacturers themselves, who have suffered losses from spoiled stock, have thereby been induced to prepare an extract of rennet in form of powder. This is of a light-brown color, not hygroscopic, and curdles milk when used in the proportion of 1 : 300,000. All inert or useless constituents, which generally accompany the ordinary liquid rennet, are excluded in this preparation, which dissolves easily, and when filtered, yields a perfectly clear solution. For preparing liquid rennet (liquor seriparus) of the same strength as that prescribed in the German pharmacopœia, 12 grammes of this powder are dissolved in 2 kilos of white wine, which is best performed by shaking the powder first with about one-tenth part of the wine until the rennet-ferment has been dissolved, then adding the remainder, and finally filtering.—*Pharm. Zeit.*, No. 9.

Renovated Medicinal Herbs.

AROMATIC medicinal herbs, the odor of which would justify the suspicion of an artificial impregnation with essential oil, may be distinguished from natural ones by the following method. Place about 30 grammes of the suspected herb into a vessel, cover it with ½ litre of cold water, let it stand 24 hours in a cool place, filter, add to the filtrate a few grammes of ether, and cover the vessel with a well-fitting glass plate. On removing the latter, after the lapse of an hour, the odor of ether adhering to the lower side of the glass-plate is quickly followed by the distinct odor of the essential oil, if it had been added to the herb; while no odor will be perceived, if the herb was not manipulated.—*Schweiz. Woch. f. Pharm.*

Hydrobromic Acid.

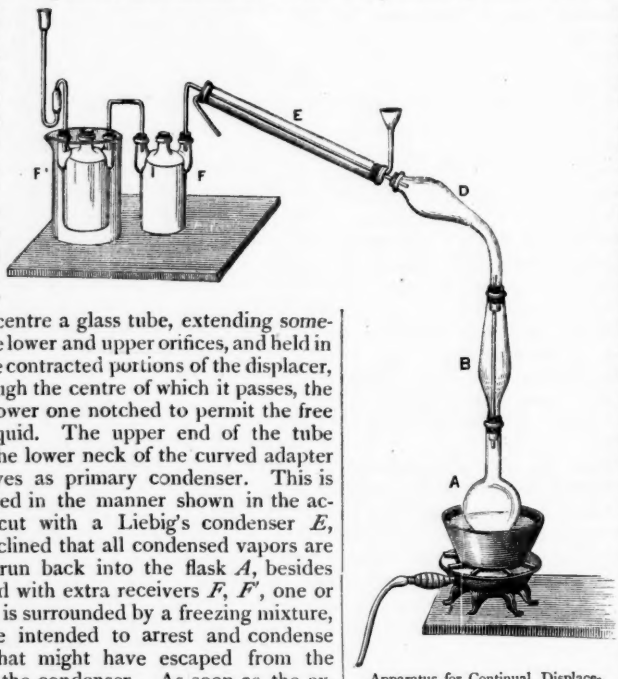
DISSOLVE 1,191 grains of potassium bromide in 15 fl. oz. of water, then add 1,500 grains of crystallized tartaric acid, previously reduced to powder, and heat the solution, until the whole is dissolved. Set it aside in a cold place, frequently stirring. After 24 hours add to the mixture 2 pints of alcohol, and again set aside for 24 hours. Separate the liquid from the precipitated cream of tartar by filtration, recover the alcohol by dis-

**Arch. d. Pharm.*, 1876, Oct., 334.

tillation,* and evaporate the remaining solution of hydrobromic acid on a sand-bath, under constant stirring, until it has been brought to measure 16 fl. oz. This acid has a spec. grav. of 1.075, and contains 10 per cent. of HBr. By further evaporation it may be concentrated until its spec. grav. has attained 1.480, containing about 46 per cent. HBr. If heated beyond this point, hydrobromic acid vapor, instead of water, is given off.—CH. RICE.

Apparatus for Continual Displacement.

A CONVENIENT form of apparatus, which permits a continued digestion or percolation with volatile liquids is that proposed by Paul Cazeneuve and O. Caillol, in the *Répertoire de Pharmacie* of Feb. 25. The flask *A* is provided with a cork through which passes the neck of the elongated displacer *B*, which is designed to receive the substance to be exhausted. This displacer carries in its centre a glass tube, extending somewhat below the lower and upper orifices, and held in its place, in the contracted portions of the displacer, by corks, through the centre of which it passes, the edges of the lower one notched to permit the free passage of liquid. The upper end of the tube extends into the lower neck of the curved adapter *D*, which serves as primary condenser. This is again connected in the manner shown in the accompanying cut with a Liebig's condenser *E*, which is so inclined that all condensed vapors are compelled to run back into the flask *A*, besides being provided with extra receivers *F*, *F'*, one or both of which is surrounded by a freezing mixture, and which are intended to arrest and condense any vapors that might have escaped from the upper end of the condenser. As soon as the exhaustion of the material in *B* is completed, the condenser *E* may be connected with *D* by means of a bent tube and reversed, so as to incline the other way, by which means the condensed liquid may be recovered. Highly volatile liquids, such as ether or carbon disulphide, are apt to occasion trouble in ordinary reflux-condensers, on account of the drops of condensed liquid being met in their downward road by ascending vapors, which often expel the condensed liquid by force. In the present case, the flasks *F* and *F'*, are specially intended to prevent this loss. The last one of these is moreover provided with a safety-tube, containing mercury, whereby an additional safeguard is provided.



Apparatus for Continual Displacement.

Preparation of Liquid Chlorine.

THE preparation of this element in the liquid form from crystals of hydrous chlorine ($Cl,5H_2O$) by the methods generally described is a somewhat tedious operation. Dr. A. B. Senior and Mr. A. J. G. Lowe, however, have devised a comparatively easy method, which is as follows: A stream of chlorine gas is passed through a bottle, about two-thirds full of water and surrounded by a freezing mixture of sodium sulphate and hydrochloric acid.—Care is taken to prevent the water from freezing, and frequent agitation accelerates the formation of the hydrous chlorine. When by the deposition of crystals the contents of the bottle are fairly thick, they are poured through a funnel into a piece of combustion tubing sealed at one end. A plug of cotton, attached to the end of a piece of twine, is inserted into the tube, and is slowly pressed downwards by means of a glass-rod, or piece of glass-tubing. In this way the crystals are separated from the chlorine water, and are compressed tightly in the bottom of the combustion tube, while the water fills the tube above the plug and is poured off. By means of the string the plug is withdrawn, when more wet crystals may be added and the process of straining repeated. The combustion tube should be placed in a freezing mixture from time to time. When sufficient hydrous chlorine has been collected, the tube containing it is surrounded by a freezing mixture, and carefully sealed within about two inches of the surface of the crystalline mass. When cool, it is surrounded by wire-gauze, and heated in a water or air bath to from 100° to 150° F. In the course of ten minutes the crystals will be completely de-

* Alcohol and moderately strong hydrobromic acid yield small quantities of ethyl bromide, or bromhydric ether; hence the acid should be sufficiently diluted. The above process furnishes a product, which is unobjectionable even when employed in the manufacture of photographic chemicals, while, if prepared by acting on bromine with sulphydric acid, the resulting product retains very faint traces of sulphur, undistinguishable by ordinary reagents, but betraying their presence by peculiar spots, or by fogging, upon the sensitized photographic plate.

composed, the liquid chlorine appearing below the chlorine water as a dense, deep-yellow oily-looking liquid.—*Pharm. Journ. & Trans.*, 1877, March 10.

Huber's Reagent for free Mineral Acids.

THIS reagent is a mixture of solution of ammonium molybdate and solution of potassium ferrocyanide, forming a clear yellowish liquid. If a small quantity of this be added to a colorless aqueous solution, containing, either alone, or in presence of salts of the alkalies and earths, small traces of free mineral acids (sulphuric, hydrochloric, nitric, phosphoric, arsenic, sulphurous, phosphorous acids), a reddish-yellow coloration is at once produced. If more than mere traces of these acids are present, the tint is more or less dark-brown, owing to the formation of a more or less copious precipitate, which, however, again disappears on adding the least excess of alkali. Boric and arsenious acids give no reaction. This reagent may find employment as indicator in acidimetry.—*Polyt. Notizbl.*, from *Ph. Centralh.*

Estimation of Sodium Sulphate in Epsom Salt.

FR. ANTHON recommends the following ready method for ascertaining the relative proportions of sodium and magnesium sulphates in a commercial sample of Epsom salt. A portion of the salt is dehydrated at 200° C.; 10 gm. of the dry substance are dissolved in 90 gm. of water, and the specific gravity of the solution is determined at 15° C. by means of a picnometer, or other sufficiently accurate instrument.* The following figures then indicate the percentage of pure magnesium sulphate in the sample of salt under examination:

Spec. Grav.		Magnesium sulphate.
1.09170	corresponds to	0 per cent.
1.09306	"	10 "
1.09442	"	20 "
1.09578	"	30 "
1.09714	"	40 "
1.09850	"	50 "
1.09986	"	60 "
1.10122	"	70 "
1.10258	"	80 "
1.10394	"	90 "
1.10530	"	100 "

—*Schweiz. W. f. Ph.*, from *Dingl. Pol. J.*

Estimation of Boracic Acid.

AN easy and practical method for the determination of boracic acid, which has long been a desideratum, appears to have been supplied by Mr. Paul Berg, an abstract of whose method we give in the following. It having been observed that the addition of strong alcohol to a solution of boracic acid or a borate, which has been partially precipitated by baryta, causes the complete separation of barium borate, there only remained the necessity to find an acid which would form both a sodium- and a barium-salt soluble in alcohol. Such an acid was found to be bromhydric acid, since NaBr, as well as $BaBr_2$, are easily soluble in 95 per cent. alcohol, and having the additional advantage that sodium borate is easily decomposed by it into sodium bromide and hydrated boracic acid.

Finely powdered borax is dissolved in hot water, introduced into a flask, colored with a little tincture of litmus, and enough bromhydric acid is added to produce an acid reaction. There is then in solution, sodium bromide, boracic acid, and the excess of bromhydric acid. The flask is now closed with a doubly-perforated cork, carrying a tube filled with pieces of caustic potassa, to absorb any carbonic acid which might be carried in by the air,* and a small funnel, containing a moistened filter. Cold saturated baryta-water is passed through the latter into the flask, until, after gently shaking, the precipitate which forms at first is redissolved. Freshly boiled alcohol of 95 per cent. is now poured in through the same funnel, so as to produce an alcoholic solution of about 55–60 per cent. in the flask, the potash-tube and funnel are removed, and replaced by short glass-rods, the flask is shaken and then set aside for 24 hours. The glass rods are then again removed, the potash-tube inserted into one of the perforations, and a syphon-tube into the other, by means of which most of the clear liquid may be removed. Alcohol of 75 per cent. having been rapidly poured in after removal of the syphon, the flask is again hermetically closed and set aside. When the sediment has been deposited, the liquid is removed in the same manner, the sediment, consisting of barium borate transferred to a tared filter, and washed with alcohol of 75 per cent., taking care to prevent free access of air, except towards the end. The filter and precipitate are finally dried in the exsiccator and weighed as barium (mono-) borate: $BaO, B_2O_3 + 4$ aq.—*Zeitsch. f. anal. Chem.*, 1877, p. 25.

Note on Two Species of Vegetable Wax.

MR. P. GUYOT gives the following reactions for distinguishing the wax of the South American wax-palm, *Ceroxylon Andicola*, or carnauba, from that of *Myrica cerifera*, or myrtle-wax:

Carnauba wax: This is generally of yellowish white color, very hard, and of smooth fracture.

Sulphuric acid poured on the fused wax develops a light yellow color and white and brown streaks; after a while, the color passes to dark brown. By agitation, the whole mass becomes deep red-brown.

Phosphoric acid bleaches the fused wax slightly.

* Mohr-Westphal's balance may be used with great advantage. See pg. 78 of our March Number.

* The necessity of excluding carbonic acid arises from the subsequent presence of free baryta in the liquid, which might be converted into carbonate, and thereby contaminate the precipitated borate.

On raising the temperature a whitish emulsion is produced.

Nitric acid imparts to the wax a golden yellow color, which gradually turns reddish, intermixed with brown streaks. Hot nitric acid attacks the wax with violence.

Acid mercury nitrate, poured over the fused wax, does not color it; after the addition of sulphuric acid, a light brown color is developed.

Potassium bichromate and sulphuric acid, when brought in contact with the fused wax in a tube, turn it first brown, then black.

Myrtle-wax: Sulphuric acid produces immediately upon the fused wax a deep red-brown color, followed by dark brown and mahogany-brown. The reddish streaks are darker than the color of the liquid. By agitation and cooling, the mass assumes a pale dirty brown color.

Phosphoric acid does not alter the wax at its point of fusion, but on raising the temperature, it produces a white emulsion.

Nitric acid attacks the wax at a temperature of 48° C. (118.4° F.), coloring it uniformly golden yellow and converting it into a yellowish cream; no streaks are visible in the liquid.

Acid mercury nitrate, employed by itself, slightly bleaches the wax; on adding sulphuric acid, a yellowish color is developed which persists for some time.

Ammonia has but little effect upon this wax.—*Répert. de Pharm.*, 1876, 710.

California Manna.

THE *Druggists' Circular* has received from a California correspondent some cuttings of cedar and pine, covered with saccharine matter which old Californians call "honey dew," and which is only found in quantities in extremely dry seasons, when the trees are said to be literally covered with it. The specimens were submitted to Professor George Thurber, who furnishes the following notes:

"The specimens consist of terminal twigs of two conifers: a pine of the section with ternate leaves (three in a cluster or sheath), but which cannot be accurately identified without the cone; and the California white cedar, *Libocedrus decurrens*. Specimens of both are freely incrusted in a stalactitic manner with a nearly pure white substance. A friend who stood by as I opened the box at once declared them to be fragments of a Christmas tree; you made a similar comparison in your note accompanying them, which shows that the resemblance of the incrustation to candle drippings at once suggests itself. The taste recalls that of manna, and if a fragment is carefully separated, that is not in direct contact with the stem or leaf, it is free from any terebinthinate flavor. It is one of the numerous saccharine exudations classed under the head of *manna*, to indicate a common method of production, rather than identity of chemical characters.

"While the manna of commerce is furnished by a species of ash (*Fraxinus Ornus*), similar exudations, more or less valued in the countries where they occur, are produced by trees of widely different families. The *Leguminosæ* and *Rosaceæ* contain manna-bearing plants; a tamarisk, a cistus, a willow, and one or more oaks, afford similar products; even the genus Eucalyptus, of which so much is now expected, has a manna-yielding species; with all these very dissimilar plants producing sugary exudations, it is not so surprising that we should find them in a family where they would be least expected, judging from its ordinary 'naval store' products—the *Coniferæ* or Pine Family.

"Manna from the conifers is, however, no recent thing. The Briançon manna, employed in France early in the last century, is from a conifer, the European larch (*Larix Europæa*), and received its name from being collected in the mountains about Briançon, where it is still gathered by the peasants for their own use, though no longer in commerce. It is found in midsummer adhering to the leaves of the larch, and is collected early in the day, as it disappears with the heat of the sun. The old writers mention the Manna of Lebanon, which some authors say was afforded by the Cedar of Lebanon (*Cedrus Libani*), but others assert that it was only a synonym for gum mastic.

"One of the finest pines of that country of magnificent trees, our Pacific coast, is known to cultivators as Lambert's Pine (*Pinus Lambertiana*); this reaches the height of 200, and even 300 feet, and is useful as well as grand, its wood serving there for all the purposes that the white pine does with us. Ordinarily, this tree exudes only turpentine, and but little of that; but when the tree is injured by being partially burned, it yields a saccharine substance, formerly used by the settlers for sweetening their food, on which account the tree is known all along the coast as the 'Sugar Pine.' According to Prof. J. S. Newberry, Pacific R.R. Reports, vol. vi., Botany, p. 44, the laxative properties of this pine-sugar are known to the frontiersmen, who make use of it as a medicine. He says: 'Its resemblance in taste, appearance, and properties to *manna* strikes one instantly, and but for a slight terebinthine flavor it might be substituted for that drug without the knowledge of the druggist or physician, its physical and medical properties are so very like.'

"The pine, however, among the specimens in question, is not the sugar pine (*P. Lambertiana*), as that species belongs to the section having five leaves in a sheath, and shows that there are at least two species of our far Western pines which produce a manna. The observation as to its production by *Libocedrus* is, so far as I am aware, quite new, and adds one more to the manna-yielding genera.

"As to the cause of this exudation, so long as the phenomenon in the manna ash, where there has been abundant opportunity for study and observation, remains unexplained, it is hardly worth while to conjecture in the present case, in which we have only the results.

"Manna is exuded from this ash spontaneously, the tree being wounded merely to increase the product. It only occurs in warm and dry countries, and is greatly affected by the character of the season. We have in the specimens, and also in the sugar produced by the sugar-pine, not only an exudation, but one very unlike that usually yielded by the tree. The ordinary exudation from these trees, in common with others of the pine family, is turpentine, an oleo-resin. In these cases the character of the exudation is entirely changed, and we have a form of sugar belonging to an entirely different class of principles. In the sugar-pine this appears to be affected by destroying the vitality of the tree by partial burning; in the specimens before us it is ascribed to extreme drought.

"As some of the products resembling manna are due to the punctures of insects, I examined a portion of this by dissolving the sugar from a stem; a few fragments of what appear to be remains of *aphides* were found in the solution, but none attached to the twig. I have not been able to make any examination of the optical or other properties of the sugar."

Pepsin and its Preparation.

In *The Practitioner* for March, Prof. Oscar Liebreich, of the University of Berlin, contributes a valuable paper on "The Use of Pepsin in Medicine, and its Preparation," in which he refers to the attempts that have been made to employ the peptones as therapeutic digestive agents, and their failure owing to the rapidity with which they undergo decomposition. He expresses his belief that the field of usefulness of pepsin in practical therapeutics is very great, and that it may be still further extended with very great advantage. But the success of this remedy has been greatly hindered, and the result of clinical and of scientific experiment as to the results which may be obtained have been much confused, by the number of comparatively worthless preparations which have been employed, and by the instability and uncertainty of some of those preparations, which in their most active states have from time to time yielded excellent results, and have thus attained a good reputation. The uncertainty of a potent remedy is almost as injurious and even more misleading than the inertness of a popular remedy, and the treatment of disorders of digestion by pepsin has suffered greatly from both these drawbacks and from both these sources of fallacy.

Following the description of a number of conditions in which the employment of pepsin as a remedy is calculated to be of benefit to the patient, he remarks that there are certain counter-indications of the use of pepsin, to which it may be well to refer. Among them are carcinoma and ulceration of the stomach. When there is an ulcer of the stomach it is an object of treatment to afford a smooth covering to the ulcer by bismuth, or by the administration of nitrate of silver; to administer pepsin is to incur the risk of hastening the process of thinning, which there is already too much reason to fear from the action of the normal pepsin of the stomach.

"To fulfil the therapeutical indication of pepsin it is, however, necessary to have a pure and reliable sample. There are various methods of obtaining the article. Thus there is the method of Brücke, by treating the gastric juice (obtained by well-known methods), with a solution of cholesterine in ether; the cholesterine, being precipitated, enters into mechanical combination with the pepsin, and pure pepsin is obtained by removing the cholesterine by the further addition of ether.

"This form of dry pepsin is absolutely pure, and from it may be learned the qualities and powers of pepsin. But the method is too costly for general use, and its advantages are mainly for scientific purposes. There are various dry preparations of pepsin in powder and cake, which are well known, and, I believe, much used in medicine. But these preparations are very far from stable or reliable, and however active some of them may be when perfectly fresh, they do not remain active, and a large part of the pepsin powders prescribed are absolutely inert. Pepsin, although an albuminoid, differs, among other things, from ordinary albumen in being soluble in diluted alcohol. Advantage has been taken of this to prepare pepsin wines, but the alcohol does not prevent the ferment from undergoing change, and if a "pepsin wine" be examined after some time, it will be found not to contain a trace of pepsin, and to be absolutely devoid of digestive power. I found, many years ago, that to preserve the ferment of pepsin there is only one reliable agent, that is glycerine, the powerful preserver of vaccine-matter and other animal ferments. My first researches on this subject, made many years ago, have been amply confirmed by a great number of observations, and for all scientific experiments on digestion I have now for many years employed only these solutions. I strongly recommend practitioners, for all therapeutical purposes, to employ such a solution. In this way they will avoid the fallacies and disappointment due to the employment of deceptive and unequal preparations, and they will the more readily define the true limits of pepsin as a therapeutic agent, and its place in the armory of medicine. It is not to be reckoned among the most powerful and heroic remedies, but it is one which is of very agreeable and efficacious action; which very frequently gives exceedingly good results in large classes of ordinary and troublesome complaints, and which may be employed with confidence and advantage when its powers are stable and reliable."

[Those who have been accustomed for a number of years to make use of some of the dry preparations of pepsin manufacturered in this country can endorse us in saying that, however true Professor Liebreich's remarks may be regarding the quality of preparations offered for sale in the German market, they will not hold good on this side of the water. The dry preparations have,

we believe, been the ones most largely employed in this country, and we are not aware that, after several years of trial, their effects have led to want of confidence among those who are capable of being judges.—ED. N. R.]

Picric Cotton.

DR. EUGENE CURIE has introduced a new method of dressing wounds, by means of cotton impregnated with picric acid. This substance, which is also called trinitro-phenic acid or trinitrophenol *), is but little soluble in cold water, requiring 160 parts thereof at 5° C., and 81 parts at 20° C.; but alcohol, ether, and benzine dissolve it readily. It imparts a light yellow color to textile fabrics, and is especially used in silk-dyeing. For the impregnation of cotton, almost any solvent of the acid will answer, but an ethereal solution gives the best results. When preparing large quantities, the ether used may be recovered by distillation. The proper proportions to prepare this new dressing, which has already been employed with good success in the hospitals of Paris, are as follows: Picric acid, 0.25 gm. (3.8 grains); ether or 94 per cent. alcohol, 25 gm. (386 grains); cotton, 10 gm. (154 grains); dissolve the acid in the menstruum, and impregnate the cotton uniformly with the solution.—From *Rép. de Pharm.*, 1876, 705.

Sodium Santonate.

THE following are Lepage's directions for preparing this compound:

Santonin, in powder....	100	grammes.
Alcohol, 90 per cent....	500	"
Water, distilled.....	500	"
Lime, burnt.....	80	"
Sodium carbonate.....	90	"

Dissolve the santonin in the water and alcohol with a moderate heat, add to the solution the lime, previously slaked, and made into a milk with water. The liquid thereby assumes a magnificent rose-red color, which, however, disappears after 10 or 15 minutes, as soon as all the santonin has combined with lime. The heat is continued a short time, and the sodium carbonate, previously dissolved in double its weight of water, is added. After brisk stirring, the insoluble parts are allowed to settle, and the liquid is filtered. The filtrate is deprived of alcohol by distillation, and the remaining solution evaporated to 200–220 gm., which solidify into a compact mass during the next 12 hours. This is powdered, digested with 800 gm. of alcohol of 90 per cent, the solution filtered, the residue (sodium carbonate in excess) washed with alcohol, the alcohol recovered, and the remaining solution concentrated until a pellicle orms. After a few days most of the sodium santonate has crystallized in small needles. The mother-solution furnishes more crystals on further evaporation. The yield is 170–180 gm.

Sodium santonate, thus prepared, is perfectly white and contains 51 per cent. santonic acid (santonine). It is soluble at ordinary temperature in three parts of water and in four parts of alcohol of 90 per cent. The aqueous solution tastes decidedly bitter and has an alkaline reaction. Ammonium oxalate, barium chloride, and sodium carbonate must impart to it no cloudiness. Acids precipitate the santonin.—*Journ. de Ph. et de Ch.*

Purified Oleic Acid.

MR. L. WOLFF proposes the following method of obtaining oleic acid of sufficient purity to prepare the oleates at present in use: Oil of sweet almonds is saponified with caustic potassa; the soap is decomposed with tartaric acid, and washed with hot water to separate the precipitated potassium bitartrate from the mixture of oleic and palmitic acids. These are combined with litharge, forming oleo-palmitate of lead, from which petroleum benzine dissolves the oleate of lead, leaving the other salt as a residue. From the benzine solution the lead is precipitated by dilute hydrochloric acid, in form of lead chloride, and on evaporation of the benzine, oleic acid will remain, sufficiently pure for pharmaceutical purposes, giving clear and permanent solutions with the red and yellow varieties of mercuric oxide, as high as 30 per cent., if necessary. As crude commercial oleic acid can be bought at very low figures, this may be made the starting-point of the process, yielding a purified acid at a very small expense. To gain the same end, the simplest way is perhaps to use the ready-made oleo-palmitate of lead, the officinal lead-plaster, to dissolve it in benzine, and extract from it the oleic acid by precipitating the lead by hydrochloric acid. Oleic acid thus prepared has been used for some time, and found to answer better for the preparation of the oleates, than the article sold by some of the manufacturing chemists.—*Am. Journ. of Pharm.*

A New Method for administering Kousso.

DR. CORRE, in a communication to the *Bulletin de Thérapeutique* (1876, pg. 556) says: "Many have tried to bring kousso into such a pharmaceutical shape, that, while its properties as a tænicide remain unimpaired, it may be administered without repugnance. I think the following method, which I have successfully used, accomplishes the purpose. Treat 25 grammes of powdered kousso with 40 grammes of hot castor oil, and afterwards with 50 grammes of boiling water, by displacement; express, and combine the two percolates into an emulsion by means of yolk of egg, and add 40 drops of sulphuric ether. It may be sweetened with syrup and aromatized to taste. This is taken at one dose early in the morning. The worm is expelled during the third or fourth evacuation, after about 6 or 8 hours."

* Also called carbazotic acid, Welter's Bitter, Chevreul's Bitter, bitter acid, indigo-bitter, etc. It results from the action of strong nitric acid upon many organic substances, as phenol, creasote, indigo, aloes, etc. Its preparation requires a close attention to temperature and other details, to avoid explosion; and its alkaline salts, when heated, explode with great violence.

Preparation of Pure Bismuth.

ACCORDING to Thürach, pure bismuth may be obtained by the following method. Commercial bismuth is melted under a surface of potassium chlorate to which from two to five per cent. of sodium carbonate had previously been added: the quantity depending upon the amount of impurities in the bismuth. The resulting regulus is dissolved in the least quantity of nitric acid. The solution is to be mixed with a concentrated solution of oxalic acid in slight excess, and then considerably diluted. After the precipitate has settled, it is separated from the clear liquid by decantation and filtration and washed with cold water. If the precipitate is allowed to remain too long in contact with the supernatant liquid, it is likely to become contaminated with iron; but the subsequent ignition of the dry precipitate again removes this impurity. By ignition the oxalate splits into metal and carbonic acid. In presence of iron there is formed a bismutho-ferric oxide, which may be completely separated from the metal by hydrochloric acid. The chief aim of the author was to devise a process which would remove iron and silver as completely as possible, but traces of the latter metal may still remain.—*Schweiz. Woch. f. Ph.*, No. 5, from *Erdm. J. f. pract. Chem.*

RECENT PAPERS.

Journal de Pharmacie d'Anvers.

February. DEPAIRE: "Estimation of Urea." [The author desired to arrive at a process which would give reliable results even in the hands of those persons, who are not specially trained in chemical manipulations. He adopts the process of Yvon and Esbach, with certain modifications. Sodium hypobromite is used with excess of an alkali, to decompose the urea, and the resulting nitrogen gas is measured over water, which retains the other products of the decomposition, namely, carbonic anhydride and water. 10 centigrammes of urea, decomposed by sodium hypobromite in alkaline solution, gives off a volume of nitrogen, which measures 37 cubic centimetres at 0° C., and 760 m.m. pressure. In order to avoid calculations, the plan of Yvon may be adopted, namely, to make a preliminary trial upon a known solution of urea just before examining the urine, and to compare the two results. Naturally, the amount of urea corresponding to the urine must be increased in the same ratio, as the figure found for 0.10 gm. of pure urea exceeds 37. Supposing 10 centigrammes of pure urea have been treated in the manner described, and have disengaged 40 c.c. of nitrogen, and 10 c.c. of an unknown solution of urea, or of urine, disengage under the same circumstances 66 c.c., the quantity of urea contained in the latter will be found as follows: $40 : 10 = 66 : x$; $x = 16.5$ centigrammes. The result will be correct as long as there is not present an excess of uric acid or albumen. In the former case it is best to expose the urine to cold, to promote the crystallization of the uric acid and urates, which are then removed; and in the latter case the urine must be heated in a closed vessel, so as to coagulate the albumen.]

E. MEUNIER: "On Vegetable Albumen." [The author has studied some of the properties of plant-albumen, and sums up his results as follows: 1. The albumen, contained in fresh plant-tissues, exists there in a condition soluble in water. 2. On drying the plants, even at as low a temperature as 50° C. (122° F.), it becomes 'concentrated in the elementary organs,' and insoluble. 3. Boiling fresh unpounded plants in water, does not always coagulate the albumen. 4. During coagulation, albumen absorbs about 7 times its weight of water. 5. The liquid thus retained in the cells, fibres, and vessels contains active principles, which water can no longer extract. 6. Alcohol also coagulates the albumen, but causes less of the active principles to be retained by it. 7. Albumen not being capable of passing through cell-walls by osmosis, and being at the same time able to retain active principles, it is necessary, in order to obtain the whole of the latter, to break up the plant-tissue by pounding. 8. Desiccation of vegetables favors the coagulation of albumen, at comparatively low temperatures. 9. The coloration of aqueous macerates, made with fresh plants, proves that drying has produced chemical changes.]

Pharmaceutical Journal and Transactions. Nos. 347–350.

W. LAUDER LINDSAY: "Chrysophanic Acid and its Sources." [The author draws attention to the fact, that the most abundant source of this acid is the common yellow wall lichen, *Physcia parietina* Köhl, or *Parmelia parietina* Ach. Indeed, this was the very source in which Schrader, in 1819, first noticed it, although it was only in 1843 that Rochleder obtained it in a pure state.]

A. SENIOR AND A. J. G. LOWE: "The Preparation of Liquid Chlorine." (See pg. 108.)

W. DYMOCK: "Notes on Indian Drugs." [*Pedalium Murex*, local name, Karonta and Burra-Gokhroo (see NEW REM., March, 1877, pg. 90).—*Vitex Negundo*, local Lingoor; leaves are aromatic, and fruit is like a pepper corn, and also aromatic.—*Smilax ovalifolia*, local Gootee. The roots are used by the Portuguese at Goa as 'sarsaparilla.'—*Jatropha Curcas*, local Maghli Erendi; the root bark has an acrid taste, like fresh mezereon; it is applied externally in rheumatism.—*Mesua ferrea*, local Nagchumpa; bark is mildly astringent and feebly aromatic.—*Microrrhynchus sarmentosus*, local Almirao; roots are used at Goa as a substitute for taraxacum.—*Hydrocarpus inebrians*, local Kowtee; the oil is used for burning, and as a remedy for skin-diseases; it is at present on trial as a substitute for chaulmogra oil, being much cheaper (see NEW REM., V., pg. 146).—*Sida acuta*, local Tukati; root is diuretic and demulcent.—*Xanthoxylon Rhetsa*, local Chirphul; root is used at Goa as a laxative.—*Anacardium occidentale*, local Kajoo; the Portuguese consider the spirit obtained from the torus to be a valuable diuretic, and apply it externally in rheumatism. The acrid oily principle, *cardol*, is prepared in large quantities in the Goa territory during the process of roasting the nuts, and is said to be used for tarring boats. Mr. Dymock bought 12 gallons at a country fair for three rupees (= 6 shill.).]

A. GUBLER: "Note on a Piper, called Jaborandi, in the Province of Rio Janeiro." (See pg. 103.)

Archiv der Pharmacie.

January. R. WOLFF: "On the Transmutation of Cantharidin in Spanish Flies." [Since dampness is known to destroy the activity of cantharides, and the active principle, cantharidin, is unaffected by dampness, there must be some other constituents present, which, by their own decomposition, induce that of the active principle. If a solution of potassa be added to a watery extract of old cantharides, and the mixture be heated, ammonia is given off. Now, although cantharidin does not combine directly with ammonia, it is possible that it may form a compound with it at the moment of its formation. The author indeed, appears to have succeeded in preparing such compounds, one of which, being crystalline, remained unaffected by hydrochloric acid, even when boiling, and by cold nitric acid, while hot nitric and cold sulphuric acid dissolved the crystals with decomposition, cantharidin and the respective ammonia-salt being formed. The nature of this and another compound obtained are, however, not yet determined. In conclusion, the author insists on the propriety of discarding all pharmacopœial preparations of cantharides, and substituting therefor the only active principle they contain, namely, cantharidin, which could be prepared from fresh flies at a very reasonable price, if the demand for it were greater.]

W. KIRCHMANN: "Discovery and Preparation of Amine-

Bases by means of preparing their Alums." [The author has originated a very easy process for obtaining certain volatile alkaloids by means of passing a stream of carbonic acid through the substance moistened with solution of soda and enclosed in a still. (See NEW REM., v., 328.) He now states, that the readiest method of collecting the product is to convert it into an alum. An example will illustrate this: The dry fruits of *Heracleum asperum* are bruised, moistened with soda solution, placed into an air-tight vessel, immersed in a steam-bath, and a stream of carbonic acid is rapidly passed through it. A tube leading from the vessel into another containing alcohol and dilute sulphuric acid, carries over (in the present instance) ethereal oil and an amine-base, the latter uniting with the sulphuric acid, while the former is dissipated by the current of gas. The acid solution of the amine is supersaturated with alumina hydrate, filtered, the filtrate concentrated and a crystalline alum obtained, in which the amine occupies the place of the alkali. This alum is dissolved in water, the alumina is precipitated by soda and the base extracted by chloroform. The odor of this alkaloid, which is liquid, resembles that of conia.]

TELLIER: "On the Manufacture of Methylic Ether." (See May number.)

February. E. DANNENBERG: "Medico-Legal Detection of Colchicin." [From this lengthy and valuable paper we can only abstract the statement of the author, that ether is much less capable of extracting colchicia from its acid aqueous solution than chloroform or amylic alcohol, which latter two, moreover, dissolve less foreign substances than the former.]

AD. GRÄTZEL: "On Creosote and Carbolic Acid." (See next number.)

R. GODEFFROY: "On Artificial Butter." [The manufacture of 'Oleomargarine' has latterly assumed enormous proportions. Canada, this country, France and Germany are flooded with the substance. The principal basis of it is the 'kidney-fat' of the ox. The average amount of tallow obtained from an ox amounts to about 83 kilos., which yield the following end-products: butter, about 18 kilos; stearic acid, 24 kilos; oleic acid, 23.5 kilos; pure glycerine, 2.5 kilos.; refuse, 16.5 kilos.]

L'Union Pharmaceutique.

February. CH. PATROUILLARD: "On the Yield of Solid Extracts." [Giving the quantities, which the author obtained from 1,000 parts of various medicinal plants: Calisaya bark yielded him 100 parts of aqueous extract of firm consistence; belladonna (fresh) yielded on an average 25 parts; hyoscyamus (fresh) yielded 18 parts the year before, and 33 last year; absinth furnished 155; colocynths, 197, and monesia, 250 parts of alcoholic extract.]

Pharmaceutische Zeitung für Russland. 1877. Nos. 1, 2.

ED. HIRSCHSOHN: "Contributions to the Chemistry of the more important Resins, Gum-Resins and Balsams." [As we shall have occasion to refer in the future to certain portions of this paper, we will give here only the author's slightly modified method for detecting the presence of *Umbelliferon*, a peculiar product of the destructive distillation of resins from umbelliferous plants, and also occurring ready-formed in *Daphne Mezereum*. Small quantities (about 0.5 to 1 gm.) of the substance are heated in a test-tube until the bottom thereof becomes red-hot. After cooling, the residue and the tarry deposit upon the inner sides of the tube are boiled with distilled water, and the solution filtered. If umbelliferon is present, a fine blue fluorescent liquid is obtained, which becomes cloudy on cooling. This cloudiness disappears after addition of a few drops of soda or potassa solution, and the liquid then assumes a still more intense fluorescence.]

Schweiz. Wochenschrift für Pharmacie. Nos. 6-10.

STEIN: "Diluted Caustic." [It happens frequently that physicians desire sticks or cones of silver nitrate diluted with varying amounts of potassium nitrate, and of various diameters. These may be readily made by wrapping moistened parchment-paper around a glass rod of the desired calibre, pasting the edges, tying the lower end and drying. The proper mixture of silver and potassium nitrate having been gently fused in a small test-tube, it is poured into the mould standing in another test-tube, and when cold the paper is removed. The resulting sticks are completely white.]

F. A. FLÜCKIGER: "On the Coloring Matter of Saffron." [Stoddart's alleged test for saffron, by means of sugar and hydrochloric acid—see NEW REM., v., 303—is erroneous. The color is caused by the sugar, and not by the saffron.]

A. SAUTER: "American Plasters." [The author pays a high compliment to American elegant pharmacy for the successful introduction of handsome, reliable, and unsurpassed spread plasters, having caoutchouc as base, and being in every way superior to anything hitherto in use. The editor, however, adds, that their present high price forbids their general use. May our plaster-making friends take the hint!—ED. N. R.]

Zeitschrift d. Oest. Apotheker Vereins. Nos. 5-7.

WITTSTEIN: "Preservation of Watery Solution of Tartaric Acid." [Tartaric acid being the best reagent for potassium by the wet method, it would be highly desirable to be able to preserve a standard solution of it without the formation of fungi. This may be accomplished completely by adding to a solution of 1 part of tartaric acid in 5 parts of water, the one-thousandth part of salicylic acid.]

T. F. HANAUSEK: "On Gomo de Tuna." [This gum, which very much resembles tragacanth, is the product of *Opuntia Ficus Indica* Mill. (perhaps also of *Opuntia Tuna* Mill.), native of Venezuela and the Antilles.]

Pharmaceutische Zeitung. Nos. 11-18.

MAX KÄHLER has devised a new *cork-borer*, each separate tube of which is provided with a permanent handle. To restore the sharp cutting edge of damaged borers a special tool is used, consisting of four slightly diverging steel blades fastened in one handle, between which the edge is gently turned until sufficiently ground on the outside. The tube is then pushed over the point of one of the blades, and by turning, the inner edge is ground in the same manner.]

TH. HUSEMANN: "On Calabar Beans and their Active Principles." (See next number.)

Journal of the Chemical Society.

February. T. FAIRLEY: "Study of Hydrogen Dioxide and of certain Peroxides." [The author communicates further researches on the formation of these salts, which are prepared by precipitating an alcoholic solution of the ordinary oxide by hydrogen dioxide. On adding to a solution of sodium hydrate containing about 20 per cent. of NaHO, a solution of H_2O_2 containing about 5 per cent. of the latter, and then common alcohol of 80 per cent. in moderate excess, there is rapidly formed a crystalline precipitate of sodium dioxide, $Na_2O_2,8H_2O$. The author has also prepared a series of salts containing high oxides of uranium.]

C. R. ALDER WRIGHT: "The Akaloids of Aconite." [The author has reinvestigated the products obtained by Groves and Duquesnel from *Aconitum ferox* and *A. Napellus;* a condensed summary of the results will be found in the May number.]

American Journal of Pharmacy.

March. L. GENOIS: "Tincture of Catechu." [The author proposes a modified formula to avoid the gelatinizing of the tincture. Catechu, free from dirt and in small pieces, 3 ℥; cinnamon in moderately coarse powder 2 ℥; water and alcohol, of each q.s. Digest the catechu in 1 pint of water at a temperature of about 100° F. until reduced to a cream, let cool, add a pint of alcohol, let stand for 12 hours and filter. Then with the filtrate percolate the cinnamon, previously mixed with an equal bulk of clean sand, and moderately packed in a conical glass percolator, and when the menstruum has just disappeared from the surface, pour on sufficient dilute alcohol to make the product measure 2 pints.]

J. C. WHARTON: "The Keeping and Dispensing of Extracts." [Proposes to keep the more common extracts by making them, while fresh, into pills of certain sizes, representing ½, 1, 2, 3, 4 or 5 grains, and keeping them in earthen jars, covered with plenty of lycopodium. When

weighing extracts, the portion taken from the jar may be covered with lycopodium, by rolling between the fingers dusted over with the powder; or lycopodium may be dusted over both scale-pans, and the extract be placed on one side, the weights on the other.]

J. M. MAISCH: "Note on the Detection of Castor Oil in Copaiba." [Prof. Wayne's test,—shaking the suspected balsam with three times its volume of petroleum benzine, which, if castor oil is present, is said to produce a milky mixture, separating into 2 layers, the lower one containing all the castor oil—must be modified so as to take not less than *ten* volumes of petroleum benzine to *one* volume of the suspected balsam. But even pure balsams sometimes produce in this manner a deposit, consisting of a resinous matter, and the absence of any deposited oily layer cannot be taken as a conclusive proof of the purity of the balsam.]

TH. G. DAVIS: "Tinctura Opii Deodorata." [Proposes the following modification of the Pharmacopœia process: Boil the opium with 12 fl. ℥ of water for half an hour, and strain with expression through muslin; boil residue with 8 fl. ℥ of water for 15 minutes and express; repeat the same operation with 4 fl. ℥ of water; mix the expressed liquids, evaporate to 4 fl. ℥; when nearly cold, add gradually, with agitation, 8 fl. ℥ of alcohol to precipitate gum, starch, etc.; filter, wash the filter with alcohol, and evaporate the filtrate to 4 fl. ℥ (the alcohol may be recovered by distillation); when cold, shake with ether, etc., as directed by the Pharmacopœia.]

Liebig's Annalen der Chemie. 185, 2, 3.

F. FRERICHS: "On some new Apparatus for Chemical Laboratories." [The author has constructed a new kind of filtering apparatus, for rapidly washing precipitates, in which he confines the substance to be washed between two filters, covering the inside of two shallow cups with perfectly fitting edges, and perforated sides, the wash-water being forced through them. The advantages are: great economy of time and perfect exclusion of air.]

L. MUTSCHLER: "On Cyclamin, Primulin, and Primula-Camphor." [The author brings additional information on cyclamin (compare our February number, p. 70), and concludes that there can be hardly any doubt but that *cyclamin* is identical with *saponin*.—Fresh Primula-roots were treated in the same manner as the roots of Cyclamen, and the identity of the resulting glucoside with cyclamin was placed beyond doubt.—On distilling the roots of *Primula officinalis*, the distillate separates after a time a semisolid oily mass, or handsome six-sided glossy plates, possessing the odor of fennel or anise, having a biting, afterwards sweet taste, almost insoluble in water, soluble in alcohol or ether, and having the composition $C_{22}H_{24}O_{10}$; this is termed Primula-camphor.]

E. SCHMIDT AND R. KÖPPEN: "On Veratrin." [Merck had assigned to veratria the formula $C_{32}H_{52}N_2O_8$ obtained from analyses of the crystallized alkaloid and its compound with gold; but Weigelin's renewed examination, a few years ago, seemed to throw doubt upon this, as he obtained results leading to the formula $C_{52}H_{88}N_2O_{15}$. The authors have subjected fifteen specimens of veratria to analysis in order to investigate the differences which were supposed to exist between the commercial and the crystalline veratria, and the amorphous variety, soluble in alcohol. One of these specimens was obtained from Lampe, Kaufmann & Co., of Berlin; another from the pharmaceutical museum; another from a drug-store; three from Merck, of Darmstadt; four from H. Trommsdorff, of Erfurt; five were prepared by the authors themselves. The analyses of *all* these specimens led to identical results, namely the formula: $C_{32}H_{50}NO_9$.]

O. HESSE: "Contributions to the Knowledge of Cinchona-Barks." [Referring to his former communication on *aricine* (see NEW REM., V., p. 172), the author states that the firm of Fr. Jobst has placed into his hands a lot of Cusco-bark, which was said to contain undoubtedly aricine. On examination this proved to be true, and in addition, the author also found it to contain another alkaloid, *cusconin*. Cusconin and aricine are not contained in the bark in a free state, since chloroform is unable to extract them; and, by the way, the author remarks that Howard's statement of having seen the ready-formed crystals of quinia in the cells of calisaya-bark (see NEW REM., V., p. 355), is contradicted by the impossibility of extracting this alkaloid with chloroform. The formula of crystallized cusconin was found to be $C_{23}H_{26}N_2O_4,2H_2O$; that of crystallized aricine is the same, minus the water.]

O. HESSE: "On Conchinine." [It may not be generally known to our readers, that the most eminent authority on the chemistry of cinchona alkaloids, Otto Hesse, is in the habit of denoting the alkaloid, which we call quinidine, by the name of *conchinine*. His principal reason for doing so is this, that the substance sold in the trade under the name of 'quinidine' is an entirely impure substance, although containing some of the pure alkaloid, which has never yet appeared in the market even in a tolerably pure condition. According to Hesse, *about nine-tenths of all 'Quinidia,' which is sent to market principally as sulphate, consists chiefly of cinchonidia.*

ORIGINAL COMMUNICATIONS.

MISCELLANEOUS CONTRIBUTIONS FROM THE ORIENT.

BY PROF. XAV. LANDERER, ATHENS, GREECE.

Cases of Poisoning.—Many cases of intentional poisoning have lately occurred in Greece; the number of suicides by poison has also increased alarmingly. Not long ago a Greek priest managed to administer corrosive sublimate in the chalice used during mass, to a brother priest, whom he wished to supplant. Corrosive sublimate has become a fashionable means of self-destruction among young girls. Choke-damp, carbonic acid, and carbonic oxide gas, are also frequently resorted to. One young girl committed suicide by taking a large quantity of petroleum.

On Myrtus Communis.—The berries of the common myrtle, which contain a balsamic resin, are sold upon the markets of the Levant under the name of Myrta-Myrta. The ancient Greek name was Μυρσίνη. These berries are an excellent remedy against blennorrhœa. Many cases are on record, when persons, who had previously employed various other remedies, such as cubebs, copaiva, etc., without benefit, were completely cured by the internal use of the fresh berries, in quantities of one or two ounces per day, continued for a few days. Whether the dried berries have the same effect, I am unable to say.

The berries of *Vitex Agnus Castus* have also been used for such purposes. They have been employed medicinally from the remotest times.

The word Myrtus, Μυρσίνη, is derived from *μύρον* - balsam, because the leaves as well as the fruits possess a balsamic odor; and the word balsam * has its origin from the Hebrew Baal-shemen "the master of odors."

Oriental Hair Restorers.—I hope to render a service to all those who suffer from falling out of hairs, by stating, that a pomade prepared with petroleum has been employed by many with great success. Others have found equal benefit by using a salve prepared with fresh garlic. These two substances appear to have a specific destructive influence upon zoophytes, and cryptogamic organisms. In order to stimulate the skin and to prevent the hair-bulbs from losing their vitality, it is customary to apply an aromatic wine, prepared from fresh myrtle-leaves or fruits, or, as the ladies of Chios are in the habit of doing, a wine flavored with the leaves of the mastix-tree (*Pistacia Lentiscus*), or else with those of the true Pistacia (*Pistacia vera*).

* The word Balsam is no doubt the Hebrew *balsam*, or *balsemon*, as it occurs in Genesis and Leviticus; but its derivation from the compound mentioned in the text has long been abandoned. It belongs to the Chaldaic root *basam*, *basham*, "to be fragrant, to emit scent," the *l* being intercalated. The terms *apalsemon* and *aparsemā* occur in the Talmud.

Myrtus, and its many synonyms, as well as *myrrha*, the Hebrew and Arabic *mūr*, and the old Greek verb *μύρω to flow*, appear to belong together.

On Olibanum.—One of the most common vegetable products of the orient is the Libani, that is Olibanum. This is not only used as incense, but also as medicine, in form of a conserve or electuary (*μαντζούνι*, mantzuni), in chronic bronchitis, and even in commencing phthisis. This "panacea" is prepared from squills pounded into a pulp and mixed with powdered olibanum, derived from *male* trees. As is well known, the source of this gum resin is *Juniperus Lycia, J. Oxycedrus* and *J. Bermudiana*,* the former of which are also found growing in Syria upon the Libanon mountain, and the name olibanum as well as Libanon are derived from the Hebrew *lebonah*, signifying *milk;* the freshly exuding juice, namely, has a milk-white appearance. These coniferous plants are dicœcious (the male and female flowers on separate trees); the male tree yields the finest tears (*λιβάνι ἀρσηνικόν*, libani arsenicon, male libani); the female tree yields an inferior product (*λιβάνι θηλυκόν*, libani thelycon, female libani).

Seamen's Remedy against Seasickness.—A very popular remedy against this baneful ailment, in common use among mariners in the Levant, is the daily internal use of iron. This is obtained in a very primitive way: a portion of the iron-rust adhering to the anchor and anchor-chain is scraped off and administered. At the same time a small pouch containing roasted salt and flowers of thyme is tied upon the region of the navel as firmly as can be borne. This is said to lessen and gradually to subdue the antiperistaltic motions of the stomach caused by the rolling of the vessel. This preparation was already known to the ancient Greeks as "thymian salt." † I know several seamen who have been cured by this treatment.

Oriental Remedies against Epilepsy.—Unfortunately epilepsy is a rather common disease among children and adults in Greece and the Levant. It is called Seleniasmos (*σεληνιασμός*, or *σεληνίασμα*) "moon-sickness" from Selene (*Σελήνη*) "the moon." Owing to the general failure of what may be called "regular remedies," the common people have recourse to various nostrums. One of these is fresh raven's bile (fel corvi nigri), taken from the still warm body of the bird and swallowed. Another is the slightly torrified root of *Helleborus niger* in powder. Still another is a decoction of the leaves and flowers of *Nerium Oleander*, which bears in Greece the name picrodaphne or rhododaphne. But since this watery decoction is unsupportably bitter and can only be swallowed with the greatest reluctance, it would be much more preferable to prepare an alcoholic or ethereal extract, or an aqueous extract with the aid of sulphuric acid, and to administer it in form of pills. The two last-named remedies deserve to be critically tested as to their therapeutic value. It is a singular coincidence, that there exists a secret remedy against epilepsy which is distributed to the afflicted by the clergy of a Benedictine monastery in Germany. This is a black powder prepared by carbonizing magpies (Corvus Pica), and has been in use for a long time.

(To be continued.)

CORRECTIONS.

We are indebted to Prof. GEORGE THURBER for the following corrections of some articles published in our February number: On page 53, left hand column, *Briotherium* should be *Bryophyllum calycinum*—a native of the East India Islands, Madagascar, etc., and which has become naturalized in most of the West Indies.

—"On page 58 of the same number, occurs an article on 'Rosin Weed,' in which the botanical name of the plant is given as *Silphium gummiferum;* but no such species is admitted by botanists. The name came about in this way. Elliott (*Sketch of Botany of South Carolina and Georgia*, 1824) scarcely knew the regular 'Rosin Weed,' *Silphium laciniatum*, and copied Linnaeus' description, in which no mention is made of its resiniferous character. He came across what he regarded as a closely related plant, upon which the resin was abundant, and he, supposing it to be a distinct species, described it as *S. gummiferum*, from a single specimen found in Alabama near the Georgia line. Torrey and Gray, in working up the 'Flora of North America' (1842), had access to Elliott's herbarium, and at once placed his *S. gummiferum* where it belonged, namely, with *S. laciniatum.* I was surprised to find it revived, as I learn from your journal, by King.—All through the older of the Western States 'Rosin Weed' is the common name for *S. laciniatum*, but in the 'far west,' it is called *compass*, or *polar plant*, as the large radical leaves generally stand with their edges north and south. This, however, is not so liberally resiniferous, as the allied *S. terebinthinaceum*, which goes by the name of *prairie-dock*, from the resemblance of its leaves to those of burdock. At least I have seen more resin on the latter, but I am inclined to think that the season has much to do with the amount of exudation, and perhaps insects may be concerned, though I do not know this to be so. A resinous juice is common to all the species, of which there are eight or ten, but in how many it exudes spontaneously, I have no means of knowing. The characters of the resin, and whether it is identical in the different species, would be good subjects for some enterprising student in pharmacy to investigate."

PROTAGON.

BY SAM'L R. PERCY, M.D.

IN the November number of NEW REMEDIES there appears an article under the above heading, by Dr. C. G. Polk, of Philadelphia. I should hardly need to refer to this article but that my name is mentioned in it. The chemistry of the article is full of errors and misrepresentations. Dr. Polk commenced this subject in the *Druggist's Circular* of March, 1875, under the head of "Tri-basic Hypophosphite of Olein and Glycerine." This article was nothing but a plagiarism from my essay on Phosphorus in the Transactions of the Am. Medical Asso., for 1872. I wrote to Dr. Polk upon the subject, but received no answer. In a later number of the *Circular* he has another article on the "Hypophosphite of Olein," in which he gives not only my views on this new chemical, but my very formula for preparing it, but modestly in this gives me the credit of having been the first to *publish* his discoveries.

In the article on Protagon in NEW REMEDIES he not only plagiarizes and claims as his own the discoveries I published in my essay of 1872, but he also embodies as his own conception the circular surrounding the Vitalized Hypophosphites in many of its parts. One sentence in that says: "Dr. Percy further proved that the phosphatic nutrient of the brain was not a phosphate, but an alkaloid hypophosphite, just such an one as he prepared in the laboratory, that both in fact were identical—the *protagon* of the brain and nervous system." This was printed and largely given to the profession in 1872, while in November, 1876, Dr. Polk enunciates these views as his own.

In this article Dr. Polk claims to have discovered the facts, that I published in 1872 after some ten years' labor upon it, more than eighteen years ago, that is before *Churchill* made known to the profession the value of the Hypophosphites as remedial agents. I am sorry Dr. Churchill does not know this great discoverer. It would gladden his sad heart to find a man so noble as to let him wear laurels "over a period of eighteen years," that should decorate the brows of Polk, for he pleases to claim them after all the world, but he, "over a period of eighteen years," has been writing on and using the Hypophosphites.

Dr. Polk has followed my formula so closely as to use as I recommended "Valentine's Beef Juice." It is a strange coincidence that he should have used this for eighteen years, when it has not been known for seven years.

I believe most of my professional brethren will acknowledge that I have labored diligently for the advancement of the science of Therapeutics, and that I have ever been willing to

* Olibanum is now known to be derived from various species of *Boswellia*, nat. fam. Burseraceæ, natives of the hot and arid regions of Eastern Africa, near Cape Gardafui, and of the southern coast of Arabia. The species of *Juniperus*, which Prof. Landerer mentions, all yield a peculiar resin, possessing an agreeable odor, which is no doubt used in the manner stated in the text, but this is not true olibanum. *The latest and most exhaustive researches on the incense-trade of the ancients may be found in: A. Sprenger, Die alte Geographie Arabiens als Grundlage der Entwicklungageschichte des Semitismus.* Bern, 1875. §. 429–432.

† *ἅλες θυμίται*, Aristoph. Acharn., 1099.

impart what I have learned, and have published and freely given away essays upon subjects that I deemed new, claiming only that I should receive the credit due to a discovery. In this instance, I published in 1872 that which Dr. Polk has gradually plagiarized from 1875 to the present. I do not accuse Dr. Polk of plagiarizing all that is printed in his article, for I am certain that no one capable of chemical discoveries could make so many chemical blunders as he has made.

Dr. Polk has not only attempted to plagiarize the chemical discovery, but has tried to introduce a medicinal compound to imitate the "Vitalized Phosphates" that have been before the attention of the profession for the last five years, and have been so well received that from the profession *only* throughout the country Messrs. Caswell & Hazard dispose of about 7,000 ounces monthly. Dr. Polk has offered for sale a substance which he calls Protagon, but which I cannot acknowledge to have much similarity to that element. To save the profession from disappointment, a disappointment that I experienced in using Dr. Polk's Protagon, they may obtain the following article prepared under my own supervision, and although it will not be found so stable as the Vitalized Phosphates, it will supply a great need—an active and not dangerous phosphoid:

PROTAGON.

The Phosphoid-Nitrogenous Element of the germinal portion of wheat, and of the brains of animals and fishes.

PREPARED UNDER THE SUPERVISION OF

SAM'L R. PERCY, M. D.

47 W. 38th St.

COMPOSITION IN 100 PARTS.		
The Phosphoid-Nitrogenous element, isolated, $C_{42}H_{79}N_8P_6O_{12}$	10	Parts.
Isolated Hypophosphite of Sodium, Na_3PO_2	2	"
" " " Calcium, Ca_3PO_2	2	"
" " " Potassium, K_3PO_2	2	"
" Animal and Vegetable Albumen,	5	"
" Phospho-glyceric Acid, $C_3H_9P_3O_2$	5	"
Free Hypophosphorous Acid, its solvent, H_3PO_2	5	"

DOSE—10 *drops in water after each meal and at bedtime.*

CASWELL, HAZARD & CO.,
General Agents,
FIFTH AVENUE HOTEL BUILDING.
47 W. THIRTY-EIGHTH ST.

ADULTERATED SODIUM PHOSPHATE.

TO THE EDITOR OF NEW REMEDIES.

DEAR SIR:—I herewith take pleasure in sending you the accompanying samples of Phosphate of Soda. Having very little spare time I could not extend the examinations any further than these three, nor on any other impurities than Sulphate of Soda, all of which I wish others would take up. On examination you will find

No. 1 is a good article, containing only faint traces of impurities.

No. 2 contains a rather large admixture of Sulphate of Soda; enough to place on the extreme limits of what may be allowed to pass.

No. 3, which was furnished to me with the label "Phosphate of Soda," by one of our largest drug houses, mainly consists of Sulphate of Soda, and may be said to contain the Phosphate as impurity. As these gentlemen took it rather coolly when their attention was called to the adulteration, I wish to call the attention of druggists to this article.

Phosphate of Soda is employed in our stores for a variety of purposes; and if, for instance, we have a freshly precipitated supposed Phosphate of Lime, which instead mostly consists of Sulphate of Lime, this may bring about some very disagreeable results. On the other hand, desiring to precipitate, from a given amount of Phosphate of Soda, a certain quantity of Iron Salt, this object would, in our case, be also very seriously interfered with.

The impure article appears to the eye not so glossy as the pure; is more brittle, and can be easily detected by addition of Barium Chloride in the presence of free muriatic acid.

Very truly yours, Z.

P. S.—Sample No. 3, having been removed some fourteen days from a bottle to a paper box, has lost most of its crystal water.

[We have examined the samples sent, and can confirm our correspondent's statement regarding their character.—ED. N. R.]

REPORT OF THE COMMITTEE ON PRIZE ESSAYS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

THE undersigned Committee, having carefully examined the papers presented at the meeting of the American Pharmaceutical Association held at Philadelphia in September last, and printed in the Proceedings, have arrived at the decision, that none of the essays offered comes fully within the terms of the stipulations made by the donor, restricting the award "to the best essay or written contribution containing an *original* investigation of a medicinal substance, determining new properties or containing other meritorious contributions to knowledge; or for improved methods of determined merit, for the preparation of chemical or pharmacal products."

In view of the apparent difficulty of obtaining, by the present method, original communications of sufficient importance and merit to justify the awarding of a prize, the Committee would respectfully suggest the following modification of the present plan, which is believed to give better results, and does not conflict with any of the stipulations in the original grant.

1. The duties of the Committee on Prize Essays shall be twofold, viz.:

a. To select from the queries proposed at any one meeting, those, a satisfactory reply to which would be a valuable addition to our knowledge, and would be worth competing for. They shall publish these selected questions within four weeks after the annual meeting.

b. To examine and determine the merits of the answers to the queries designated as worthy to be competed for by their predecessors.

2. All answers presented with a view to compete for the prize shall be handed in anonymously, but distinguished by a motto, and accompanied by a sealed envelope, directed to the President, enclosing the author's name and address, and bearing on its face the same motto as the essay.

3. The Committee shall determine, within eight weeks after the annual meeting, which, if any, of these anonymous essays may be worthy of the prize, and they shall apprise the President of their decision, who shall communicate to them the name of the author. The unsuccessful papers shall be returned to the President, who alone shall be authorized to return them to their authors on demand. The successful essay shall then be handed to the Publishing Committee.

4. Should none of the papers, expressly offered as competing for the prize, be found deserving thereof, the Committee may select any other paper presented to the Association, either as answer to a query or as a volunteer essay, which they consider of sufficient merit to be entitled to the award.

Respectfully submitted,

CHARLES RICE,
GEORGE C. CLOSE,
EDW. P. NICHOLS,
Committee.

Coton Hydrophile.—This is the French name for cotton which has been cleaned and steeped in a solution of soda, in the proportion of one to four parts; and this is allowed to dry without any twisting or pressure. In this way the cotton becomes capable of absorbing fluids readily, and may well replace the charpie.

BIBLIOGRAPHY.

NEW BOOKS.

Schäfer (Edward Albert). A Course of Practical Histology, being an Introduction to the Use of the Microscope. Henry C. Lea, 1877, pp. 304, 12mo.

Defresne (Th.). Recherches Experimentales sur le role Physiologique et Thérapeutique de la Pancreatine. Paris. A. Delahaye, 1875.

Annual Report (Seventh) of the New York Ophthalmic and Aural Institute.

Announcement of the Kentucky Infirmary for Women and Children (in Louisville).

Report of the Pennsylvania Hospital for the Insane, for the year 1876.

Transactions of the Colorado State Medical Society, Sixth Annual Convention, held at Denver, 1876. [During the third day's session the following resolution was adopted:

Resolved, That this Society appoint a standing committee of five to inspect the preparations exhibited by the druggists of Colorado, and make a report to this Society; and that the Society award to the druggist exhibiting the largest and finest of home-manufactured preparations, a certificate or diploma.]

Transactions of the Illinois State Medical Society. The twenty-sixth anniversary meeting, held at Urbana, 1876, 8vo, pp. 271. [Contains, as the only notable therapeutic agent mentioned, the formula of Dr. W. L. Hansom for making a uterine suppository, the basis of which is elm-bark.]

Transactions of the Wisconsin State Medical Society, 1876, pp. 149. [We have before noticed the handsome manner in which the Transactions of this Society are published, and the valuable nature of the papers they contain. We can again compliment them upon their offspring.]

Campbell (A. Sibley). Pneumatic Pressure and the Genu-Pectoral Posture in the Reduction of Uterine Luxations.

Purple (Samuel S.). Medical Libraries of New York. An address published by the Academy of Medicine.

Wood (Dr. H. C.). The United States Pharmacopœia and the American Medical Association. [This is written in opposition to the views expressed in the report of Dr. Squibb, published by us in our July number of last year, and subsequently in pamphlet form with some modification. Any person wishing for the latest pamphlet will receive it upon sending his address, with a three-cent stamp, to Dr. H. C. Wood, No. 1631 Arch St., Philadelphia.]

Mott (Henry A., Jr.). The Chemist's Manual. A practical Treatise on Chemistry (Qualitative and Quantitative Analysis), Stoichiometry, Blow-pipe Analysis, Mineralogy, Assaying, Pharmaceutical Preparations, Human Secretions, Specific Gravities, Weights and Measures, etc. 8vo, pp. 600.

Wood (Alphonso). New Illustrated Blank Record. Roy. 8vo.

Clowes (Frank). An Elementary Treatise on Practical Chemistry and Qualitative Inorganic Analysis. 12mo, pp. 359.

Vacher (Mr.). A Primer of Chemistry. 16mo, pp. 100.

New Journal.—Zeitschrift für Krystallographie und Mineralogie. Herausgegeben von P. Groth. 8vo. Price per year, about 30 marks.

Ziemssen (Prof. H. v.)—Pharmacopœa clinico-œconomica. Eine Anleitung zur Ordination der wichtigsten Arzneimittel. 8vo. Erlangen.

Stumpf (Max).—Untersuchungen über die Wirkung der Folia Jaborandi. Inaugural Dissertation. München, 1876.

A very able and full account of the properties and effects of jaborandi.

Auerbach (G.). Anthracen: Its Constitution, Properties, Manufacture, and Derivations, including Artificial Alizarin, Anthrapurpurin, etc., with their Application in Dyeing and Printing. Translated and Edited from the manuscript of the author by William Crookes. 8vo, pp. 262. 12s. *Longmans.*

Thomé (O. W.). Text-Book of Structural and Physiological Botany. Translated and Edited by Alfred W. Bennett. Illustrated by about 600 Wood-cuts and a Colored Map. 12mo, pp. 492. 6s. *Longmans.*

Winterberg (Adele). Die Salicylsäure im Dienste des Menschen. 8vo, Wien, pp. 24.

Post (Dr. J.). Grundriss der Chemischen Technologie. I. Fabrikation der Rohproducte. Pp. xii. and 467. 8vo, Berlin. 11 M.

Directory.—Post-Office Directory of Chemists and Druggists of England, Scotland, and Wales, and the principal Towns in Ireland. 3d ed. Roy. 8vo.

Hemming (W. D.).—Questions and Answers on Materia Medica, Medicine, Midwifery, Pathology, and Forensic Medicine, for use of students preparing for examination. 12mo, pp. 64.

Semple (C. E.).—Aids to Botany (specially designed for students preparing for examination). 12mo, pp. 52.

Breidenbaugh (E. S.).—Lecture Notes on Elementary Inorganic Chemistry. 8vo, pp. 7.

Hering (C.).—Condensed Materia Medica. Compiled with the assistance of Drs. A. Kerndorfer and E. A. Farrington. Roy. 8vo, pp. 892.

Allen (F.) and **Norton** (G. S.)—Ophthalmic Therapeutics. 8vo, pp. 280, New York.

Beer (K. K.).—Pharmacological Dictionary: a Lexicon of Pharmaceutical Terminology in English, German, and Latin. Small 8vo, pp. 84. Baltimore.

Hart (C. P.).—Repertory to the New Remedies (Homœopathic). Based upon and designed to accompany Hale's Special Symptomatology and Therapeutics. 8vo, pp. 119. New York.

Martin (J. R.).—Influence of Tropical Climates. 8vo, Churchill, red, 12s.

Milne's Posological Tables: Being a tabular arrangement of all the medicines contained in the British Pharmacopœia. With dose, action, and form of administration. By William Craig. 32mo, Livingston (Edinburgh). 2s.

Oehme (F. G.).—Therapeutics of Diphtheritis. 8vo, sd. pp. 68. New York.

Wahltuch (Adolph).—Dictionary of Materia Medica and Therapeutics. 8vo, Churchill, red, 10s. 6d.

Beilstein (F.).—An Introduction to Qualitative Chemical Analysis. Trans. from 3d. ed., by I. J. Osbun. 12mo, pp. 96. Van Nostrand. 75c.

Hooker (Worthington).—First Book in Chemistry, for the use of Schools and Families. Rev. ed. 4to, pp. 176, hlf. roan. Harpers. 65c.

Nägeli (C.) and **Schwendener** (S.). Das Mikroscop. Theorie und Anwendung desselben. 2d edit. 8vo, 276, illust.

Hofmann (A. W.). Die Chemische Industrie auf der Wiener Weltausstellung im Jahre 1873. Amtlicher Bericht. (Official Report on the Chemical Industry, as exhibited at Vienna in 1873.) 8vo. Braunschweig.

Garcin (C.). Notes sur l'Acide salicylique. 8vo, pp. 11. Paris.

Dragendorff (G.). Jahresbericht über die Fortschritte der Pharmacognosie, Pharmacie und Toxicologie. For 1875. 8vo. Göttingen.

Monckman (Jas.). Science Examiner. Inorganic Chemistry. 12mo, pp. 48. Leeds.

Wagner (L. v.). Hefe und Gährung nach dem heutigen Standpunkte der Wissenschaft. 8vo. Weimar.

Sachsse (Rob.). Farbstoffe, Kohlenhydrate und Proteïnsubstanzen. 8vo.

Report of the Pennsylvania Hospital for the Insane for the Year 1876. 8vo, Philadelphia, 1877.

The Monthly Magazine of Pharmacy, Chemistry, Medicine, etc. Published by Burgoyne, Burbidges & Co., London, January and February.

Annual Report of the Eastern Dispensary. 43d year. N. Y., 1877.

Twenty-fourth Annual Report of the North-Western Dispensary. N. Y., 1877.

TRADE NOTES.

Writing-Desks.

MESSRS. JAS. A. PARK & CO. are the manufacturers of decidedly the best writing-desk for attachment to an office chair that we have yet seen, and we have been looking for one for some time. They offer two patterns, the accompanying illustration being of the simpler one, called the "*Yale*" desk. The "*Harvard*" differs from it in a number of features, the desk proper being wide enough to hold legal-cap paper and having a detachable side-leaf to hold books, shears, ruler, etc. The top of the "*Harvard*" can be slid either forward or backward to uncover a receptacle for paper and writing materials or to adjust the position of

the paper without moving the writing-arm. It also has a nickel-plated paper clip at its upper end to hold the paper steady and allow the left hand to be put to other uses. The book-rest can also be shifted to the right-hand edge of the desk.

Both desks rest upon a bearing-plate on which they turn, and a wedge-shaped pin on the under side of the plate fits into a socket in the malleable iron post marked A in the cut. This arrangement permits the desk to be instantly removed when its attachment to the chair is not desirable. We have been using a "*Harvard*" desk for nearly a month, and would not do without it. The convenience of being able to adjust one's desk so as to suit the need for light, warmth, air, or bodily comfort is no small consideration for one who is obliged to do much writing or reading, and the fault of this is that it renders one so comfortable that he runs the risk of going to sleep over his night work. The "*Yale*" retails for $3.00, or $3.50 with book-holder, and the "*Harvard*" for $5.00, or $6.00 with the extra leaf or "wing-board." For these prices they will be forwarded by express, charges paid, on addressing the manufacturers, Jas. A. Park & Co., at Lansing, Michigan.

Carbolate, Salicylate and Sulphocarbolate of Quinia.

MESSRS. MCKESSON & ROBBINS of this city have for some time past been making considerable quantities of these salts. Having had ample opportunity to examine their quality, and knowing that the best chemical skill is employed in their production, we can conscientiously recommend these alkaloidal salts as strictly pure and reliable.

Kerosene-Oil Tank.

THE general use of kerosene-oil for illuminating and other purposes has led to its being sold by many druggists and apothecaries in small cities and villages. The custom would be even more common were it not for the fact that the oil is so liable to escape from the vessels in which it is stored, and, by its penetrating qualities, soak into floors and partitions and ruin any article of merchandise with which it comes in contact. Its odor is also an objection, and still another is the loss by spilling and evaporation which invariably results from attempting to retail it from original packages. Its combustible nature is another of its demerits when it has to be kept in any considerable quantity. Many persons have avoided these objections, in a degree, by keeping the barrel containing it in some outbuilding or in the back yard, but this plan involves increased trouble and occasional absence from the store. All of these drawbacks may be entirely avoided by using one of the admirable tanks constructed by Wilson & Blye, of 36 Dey Street, and which are rapidly coming into use all over the country.

On throwing back the hood or cover, the pump, measures, shelf and drip-pan are exposed; by taking out the pump and running it into the bung-hole of the barrel, the oil may be transferred easily in five minutes without a possibility of waste.

After the oil is pumped into the tank, any shortage in the barrel may be readily and correctly ascertained by running the gauge rod into the tank. The work of measuring for retail is all done in the drip-pan; it is impossible to spill a drop, the unavoidable overflow running back into the tank; and here is another means of saving the cost of the tank, not to speak of the neatness and convenience of the method as compared with a faucet, can, or barrel.

The cover of the can fits closely, so there is no evaporation to affect and spoil other goods in the store. They are made in several sizes, from 6 to 250 gallons, and are richly and durably finished.

An Improvement in Eye-Glasses.

PEOPLE whose noses have not been of the shape which permits them to wear the *pince-nez* form of eye-glass will be interested in the invention of Mr. Frank P. Innarone, of Washington. The accompanying illustration does not entirely explain the nature of the invention, and a few words are necessary. The nose-clamps are composed of soft rubber resting on metal bases, and form not only a more comfortable surface for contact with the skin of the nose, but

are less likely to slip than metal, hard-rubber or shell clamps. The chief feature, however, is a swivel-joint by means of which each clamp is connected with the frame. This joint permits the surface of the clamp to adapt itself to whatever plane is presented by the nose, and renders it easy to retain in position glasses so constructed, whatever the shape of the bridge of the nose may be. Those, also, who have no special difficulty of this sort will probably find that this variety of clamp adds much to their comfort. Considering the simplicity of the thing, it is remarkable that it should not have occurred to some one before now.

The Trömmer Extract of Malt Company's Preparations.

We have received from this Company, whose wares are now becoming pretty well known for their reliability, some samples of their new preparations, which we take pleasure in noticing. The Emulsion of Cod-Liver Oil with Malt Extract, owing to the action of the diastase resembling that of pancreatine, is quite permanent and palatable. It is not difficult to appreciate what a valuable remedy this may be in certain conditions, and the convenience of such a combination. The Extract of Malt with Pepsine is made according to the formula of Dr. S. M. Bemiss, of New Orleans, and Scheffer's Pepsine is said to be employed in its manufacture with pepsine to aid in the digestion of albuminoids, and diastase to hasten the conversion of the starch into glucose. One would appear to get in this just the combination which feeble digestion requires.

It is essential to the action of pepsine, however, that it should be assisted by an acid solution and a temperature of 100° Fah. The latter, of course, follows ingestion, but the acid, in the case of this preparation, requires to be added.

Since our former notice of the preparations of this company we have received several communications from physicians endorsing their merits when employed in conditions characterized by deficient nutrition.

The varieties here mentioned have for some time been in use abroad—where they have met with considerable favor. We do not know that they have been offered for sale in this country before.

Spongoid Capsicum Drafts—For sale by Theo. Ricksecker, 148 William Street; are among the most satisfactory things we have ever seen offered for use as a rubefacient. They never blister.

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, providing they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue.*]

Grindelia Robusta (J. D., Klamath Agency, Oregon).—This is a Californian composite plant, having somewhat the resemblance of a small sunflower. It grows from 1 to 3 feet in height, and has bright yellow flowers, in heads, 1 or 2 inches in diameter, flowering from June to October. Before flowering, the unexpanded heads or buds secrete a quantity of resinous matter, white and sticky, like a balsam, which is finally, after the flower expands, distributed like varnish over the petals of the flower. The whole plant at this season is resinous. When growing in dry hills, it is stiff and rigid, with narrow, thin leaves; but in damp localities it is more robust and succulent, with wide, fleshy leaves. We do not know whether the plant has been met with in the more northern portions of Oregon, but in your latitude it is quite likely to occur.

Wild Parsnip (Same).—Sium latifolium has been examined chemically by Mr. And. R. Porter, whose results were published in the *Am. Journ. of Pharm.*, August, 1876, p. 348; and, in abstract, in New Rem., 1876, p. 277. The price of pure *arsenic acid* is about 12 cents per ounce. —There is no complete treatise as yet on the Flora of the Pacific Coast.—Prof. Asa Gray is just publishing the Flora of California, being a portion of the Survey Documents of that State, which you can purchase at cost from the Secretary of the State of California.

Sage-brush (Same).—This name is applied in the western portions of the United States to various species of *Artemisia*, covering large tracts of uncultivated lands in Nevada, Oregon, and other States and Territories.

Salicin (B. Ch., U. S. A.).—Your inquiry is an eminently proper one, and we take great pleasure in answering it as fully as it deserves. In the first place, it must be premised that not all willow and poplar species contain salicin. The statements of various investigators, however, as to the presence or absence of salicin in certain species are very contradictory, and it is quite likely that the same species growing in different localities may contain entirely different percentages of the glucoside. The richest species, however, are acknowledged to be *Salix Helix* L., *Salix pentandra* L., and *Salix præcox* Hoppe, the barks of which contain about 3 or 4 per cent. It is easy to determine the presence of salicin in a given bark, owing to the peculiar reaction which this substance gives with cold concentrated sulphuric acid: the latter, namely, dissolves salicin with a fine red color, and on adding water, the solution deposits a red powder, the so-called rutilin. Any poplar or willow bark which has not a rather bitter taste, and is not colored red by drops of concentrated sulphuric acid, may be regarded as devoid of or deficient in salicin. Should you succeed in finding the proper species, you may adopt any of the following processes for its preparation: 1 part of the fine-cut bark is exhausted with boiling water, the liquid concentrated to 3 parts, digested for 24 hours with ½ part of finely levigated oxide of lead made into a magma with water, and filtered. The filtrate is concentrated to a syrup and set aside, when salicin crystallizes out. The mother-liquor may once more be treated with oxide of lead, whereby a second crop of crystals is obtained. In manufacturing on a large scale, this mother-water is added to the first concentration of the next decoction. The product is purified by recrystallization. (Duflos). Or, the watery decoction of the bark is precipitated by a solution of subacetate of lead, the filtrate is boiled with chalk until the excess of the lead salt is decomposed, the liquid again filtered, and the filtrate concentrated to an extract. This is exhausted with alcohol of 34 per cent., and the solution allowed to crystallize. (Peschier). Or, 1 part of the bark is macerated in a dilute milk of lime (containing ½ part of lime), for 24 hours, and the mixture boiled for a half-hour: this is repeated with fresh milk of lime, the obtained and decanted liquids are mixed, and, after addition of ½ part of animal charcoal, evaporated to dryness. The residue is powdered, exhausted with 82 per cent. alcohol, and the solution deprived of its alcohol by distillation. In the residuary liquid the salicin crystallizes in yellowish grains, which are purified by a second crystallization with the aid of animal charcoal. (Erdmann).

Arsenic Phosphide. (Dr. P., N. Y.)—Gmelin's Chemistry, IV., p. 271: "A mixture of equal parts of arsenic and phosphorus placed in a flask and heated in the sand-bath to low redness yields a brownish black sublimate, which exhibits a conchoidal black metallic fracture, is permanent in the air, and, when heated in the air, burns at first with a slight phosphorus flame, and then forms arsenious acid (Langrebe, *Schw.*, 60, 184).—Pelletier, by melting together phosphorus and arsenic, or by boiling phosphorus under water with metallic arsenic or arsenious acid, obtained a black shining mass, which oxidized in the air. Landgrebe regards the substance thus formed as a mere mixture."

Pycnanthemum Linifolium. (L. A. R., M.D.)—The information you desire is contained in a paper read by Mr. Charles Mohr, of Mobile, Ala., at the last meeting of the American Pharm. Association. See the *Proceedings*. Experiments with a small supply are being made in this city, and will in due time be communicated through these pages, if the results warrant it.

Extractum Belladonnæ. (G. I., N. Y.)—The query, which is the *best* extract, American or English or German, cannot be answered categorically. There are *two* extracts, one prepared from the *fresh* plant, the other from the *dry*. That prepared from the fresh plant naturally can only be obtained of good quality, where the plant grows *wild*, as cultivation is unfavorable to the development of the active principle, atropia. Hence, if skilfully prepared, the English or German inspissated extract must be superior to ours. The *alcoholic* extract does not depend for its

quality on geographical location, but may be made anywhere, where discrimination and money procure the best crude material; and we assure you that the American market affords as good, if not better, alcoholic extract of belladonna, as any other.

Silicate of Soda. (L. & Co., Junction City, Oregon).—This compound can only be made profitably on a large scale, and it would require too much space to describe its preparation intelligently in these columns. You will obtain all the information you probably need, by consulting several lengthy papers on its manufacture, properties, and uses by J. W. Ordway, of Manchester, N. H., contained in the *American Journal of Science and Arts* for 1861 and 1862. See also NEW REM., vol. iv., p. 35.

Fluid Extract of Jaborandi and Pilocarpine. (J. F., Phil., Pa.)—A good formula for the fluid extract would be the following: Take 16 troy ounces of jaborandi leaves in powder, moisten them with dilute alcohol, and pack them into a conical percolator. Pour dilute alcohol on top, and when the liquid begins to drop from the orifice, close the latter and allow to macerate for 24 hours. Then remove the cork and collect 14 fl. oz. of percolate, which set aside. Then collect 24 fl. oz. more of percolate, which are to be reduced by evaporation to 2 fl. oz. Mix these with the 14 fl. oz. of reserved portion and filter, if necessary.—On the preparation of pilocarpine, see NEW REM., v., 80; 331.

Strychnia Sulphate. (M. P. W. A., Spencer, Iowa).—This salt requires about 48 parts of water for solution, and no other solvent, that we are aware of, will make a more concentrated solution. The addition of glycerine does not appear to accomplish much. When requiring a more concentrated solution, you had better use the Acetate, which is a more soluble salt.—Your "Enclosure" has not come to hand.

Flavoring Extracts. (R., Salem, Mass.)—The following formulæ will answer:

STRAWBERRY-EXTRACT (artificial): Nitrous ether and oil of wintergreen, each 1 part; acetic ether and butyric ether, each 5 parts; glycerine 2 parts. Mix.

PINEAPPLE-EXTRACT (artificial): Butyrate of ethyl, 5 parts; butyrate of amyl, 10 parts; aldehyde and chloroform, each 1 part; glycerine 3 parts; alcohol 100 parts. Mix.

ROSE-EXTRACT: Red rose leaves 2 oz.; oil of rose 1 drachm; alcohol, deodorized, 2 pints. Macerate the rose leaves in the alcohol for eight days, strain and express; then dissolve in it the oil, and filter.

Liquid Water-proof Shoe Polish (F. B. K., Freeport, Ill.)—A compound such as you describe in your note, which has a gloss, and will not rub off, can be produced by some kind of varnish, for which the following is a good formula: Dissolve 1 oz. of India rubber in 1 pint of oil of turpentine by the aid of a water-bath, preventing loss; dissolve 15 oz. of pure beeswax, 2 oz. of Burgundy pitch, and 1 oz. of gum olibanum in 4 pints of oil of turpentine; then rub 2 oz. of the finest lamp-black with 1 pint of oil of turpentine to a smooth mixture, and mix the three solutions. Add now ½ pint of copal varnish and afterwards 5 pints of lime-water in quantities of 4 oz. at a time, stirring after each addition, and continuing the stirring after the whole of it is added for some time afterwards. The mixture must always be well stirred up before any is taken out for use.

Richardson's Styptic Colloid (J. M., N. Y.)—The original formula of this preparation contained only about 4½ per cent. of tannic acid, which was often found insufficient for styptic purposes. We have prepared it for many years with nearly 17 per cent. of tannic acid. This is the formula: Dissolve 320 grs. of tannic acid in a mixture of 1½ fl. oz. of alcohol and 2½ fl. oz. of ether, add 240 grs. of gun-cotton, and dissolve by shaking.

Solution of Bromide of Arsenic (R., Richmond, Ind.)—By a mistake in making up the journal, the answer to your query has been placed on page 126, among the Prescriptions and Formulæ.

NEW PATENTS AND LAWS.

[*We will furnish gratis, to subscribers, any information relating to new patents which can be obtained from the Official Gazette of the Patent Office; and for 50c. will give copies of the drawings of such as are illustrated. Electrotypes of the illustrations contained in* NEW REMEDIES *will be furnished for 50c. per square inch.*

TRADE-MARKS REGISTERED IN U. S. PATENT OFFICE.

Certificates dated Feb. 6, 1877.

4,332. **Zinc White Lead.**—Chicago White Lead and Oil Co., Chicago, Ill. "An elaborate device in colors, and in the central part a landscape, with mountains in the distance, the most conspicuous features being the word 'MONTANA' on a red ribbon above the landscape."

4,333 to 4,339. **White Lead.**—The same. "The ship and word-symbol 'Ironsides."—The landscape, etc., as described, and the word 'SUNBEAM.'—The representation of a buffalo's head, and the word-symbol 'BUFFALO.'—The word 'Durhamville.'—An elaborate device, the predominant color of which is red, with some yellow and less blue, and printed on a quadrangular label, with floriate end-pieces and concentric circles in the central part. Within the smaller circle, in white letters on a blue ground, is the monogram of this company. Outside thereof, in circular form, is the motto 'Honi soit qui mal y pense,' and above it a yellow crown, surmounted by a lion, and at each side English standards, flags, and a streamer.—The circular border on the blue ground, and the fac-simile of the signature of E. W. Blatchford, Pres't.—The representation of the eagle, flags, crown, and swords, and the words 'CROWN IMPERIAL.'"

4,340, 4,341. **Green Paint.**—The same. "The representation of the bird and the word 'PARROQUET.' The 'LIZARD,' and the representation of a lizard."

4,342. **White Lead.**—The same. "Compound word 'NORTH-WESTERN."

4,343. **Paints.**—Harrison Brothers & Co., Philadelphia, Pa. A black surface containing a central cube-shaped figure of a contrasted color.

4,345. **Hair Preparation.**—Mary E. Johnson, Newburyport, Mass. "The word-symbol 'CALURANTINE.'"

4,347. **Composition of Superphosphate of Lime.**—Charles V. Mapes, New York, N. Y. "The name 'Mapes' and the circle, as represented."

4,351. **Medical Compounds.**—Wallace & Posthwait, Columbus Grove, O. "The word-symbol 'NATIONAL,' and the red and blue colors running lengthwise of the label, as represented.

Certificates dated February 13, 1877.

4,364. **Eye-Salve.**—Pettit & Barker, Fredonia, N. Y. (Re-registration.) "The letters and words 'Pettit's American Eye-Salve,' and 'Dr. Pettit's Genuine American Eye-Salve.'"

4,367. **Tooth Powder.**—N. R. Scott & Son, Worcester, Mass. "The word 'Lily' and the pot of lilies, as shown."

4,368. **Borax.**—Smith Brothers, San Francisco, Cal., and New York, N. Y. "The copy of our firm-signature, and the monogram composed of the letters 'S. B.' on a scroll, and the ornamental dark groundwork of the white letters."

4,374. **Cordial.**—The firm of J. A. Gilka, Berlin, Prussia, Germany. "A group of medals arranged to fill the upper field of a label, in combination with our firm-name, 'J. A. Gilka.'"

4,376. **Liniments.**—Dwight Whiting, Boston, Mass. "The word-symbol 'LINIMENTINE.'"

Certificates dated February 20, 1877.

4,379. **Medical Preparation.**—John Camrick, Bayonne, N. J. "The word-symbol 'YERBINE.'"

4,381. **Medicinal Preparations.**—R. Cotter & Co., Houston, Texas. "The letters 'I X L.'"

4,383. **Paints.**—Heath & Milligan, Chicago, Ill. "The letters 'H. M.,' arranged as a monogram upon a circular ground."

4,384. **White Lead.**—The same. "The word-symbol 'WESTERN PRIDE.'"

4,385. **White Lead.**—The same. "The word-symbol 'AMERICAN PRIDE.'"

4,386. **Paints.**—The same. "The word-symbol 'CRYLIGHT.'"

4,388. **Soap.**—Robinson Bros. & Co., Boston, Mass. "The arbitrary words 'SILVER LINE.'"

4,391. **Soap.**—Lautz Bros. & Co., Buffalo, N. Y. "The word-symbol 'OX MARROW.'"

4,393. **A Medicinal Preparation.**—Sullivan N. Smith, Jr., Dayton, Ohio. "The word-symbol 'WINE OF TAR.'"

4,394 and 4,395. **Olive Oil.**—D. St. Amant & Son, New York, N. Y. Case A. "The coat-of-arms, together with the lower frame or shield, containing the monogram composed of the letters 'G. S. A.'" Case B. "The arbitrarily-selected word 'Gourmets.'"

4,396. **Soap.**—John E. Weaver, Lancaster, Pa. "The word-symbol 'FLAG.'"

LABELS.

Certificates dated February 13, 1877.

973. "**Medicated Paper.**"—Gayetty & Co., Brooklyn, N. Y.

Certificates dated February 20, 1877.

976. "**Superior Pure White Lead.**"—Heath & Milligan, Chicago, Ill.

977. "**Superfine Coach Color.**"—The same.

978. "**Genuine Burnt Umber.**"—The same.

979. "**De Witt's Carbolated Tar Soap.**"—Thos. De Witt Kavana, New York, N. Y.

980. "**New York Nipple Shield.**"—George M. Nichols, Brooklyn, N. Y.

983. "**East India Pain Cure.**"—Donnell & Mansir, Richmond, Me.

Certificates dated February 27, 1877.

989. "**Dr. A. Q. Simmons' Liver Medicine.**"—M. A. Thedford, Chattanooga, Tenn.

990. "**Whitman's Instantaneous Chocolate.**"—Stephen F. Whitman & Son, Philadelphia, Pa.

PATENTS.

Patents granted January 30, 1877.

186,694. **Invalid Bedsteads.**—W. Spanner, Toronto, Ontario, Canada, assignor to B. Morton, same place.

186,700. **Hinged Splints.**—G. S. Adams, Philadelphia, Pa. The hinge permits lateral motion of one part of the splint upon the other. The two parts are adjusted by a long screw-nut with threads upon both outside and inside.

186,712. **Flavoring Powders.**—Wm. P. Clotworthy, Baltimore, Md., assignor to Smith, Hanway & Co. As a new article of food, flavoring powders compounded of fluid extracts or essential oils, and for flavoring food and table luxuries, and starch, meal, flour, or other dry absorbents.

186,726. **Veterinary Surgical Instruments.**—L. W. Hamilton, Pendleton, Oregon.

186,738. **Processes of Making a Pigment Base.**—Henry Knight, Liverpool, Eng. The process of making a pigment base, which consists in adding to a solution of zinc sulphate a solution of calcic sulphide; to the filtrate a solution of sodic sulphide, and to the filtrate of this latter reaction a solution of calcic chloride, the several resulting precipitates being collected together.

186,743. **Soda-Carbonating Apparatus.**—J. McCloskey, East Cambridge, Mass. Carbonate of soda is packed into a vessel around vertical pins which are afterwards removed, forming passages through which carbonic acid gas traverses the mass, and causing a large extent of surface to be exposed.

186,760. **Trusses.**—E. H. Ryno, Wayland, Mich.

186,764. **Apparatus for Drawing Still Waters.**—E. Ripley Sibley, St. Louis, Mo.

186,798. **Bottling-Machines.**—A. Christin, Chicago, Ill. The filling-tube is provided at the bottom with hooks for grasping the stopper, and at the top it ends in an air-chamber of adjustable capacity to receive the air or gas displaced in the bottle while being filled.

186,860. **Apparatus for the Hydration of Chlorine Gas.**—W. Maynard, Philadelphia, Pa.

Reissued.

7,481. **Explosive Compositions.**—Egbert Judson, San Francisco, Cal. Patent No. 183,764, dated Oct. 31, 1876. The following formula is given: Take sulphur, resin, asphalt, nitrate of soda, anthracite coal; let the sulphur, resin, and asphalt be melted together and well stirred; into this mixture put the nitrate of soda and coal, thoroughly pulverized; stir until thoroughly varnished, and so cool that the grains will not adhere to each other. The dry mixture is then ready for the nitro-glycerine.

7,485. **Processes and Apparatus for Evaporating and Calcining Alkaline Solutions.**—M. L. Keen, Stroudsburg, and Hugh Burgess, Royer's Ford, Pa., assignors to American Wood Paper Co. Patent No. 46,244, dated Feb. 7, 1865.

Patents granted February 6, 1877.

186,935. **Manufacture of Glucose.**—S. H. Johnson, Stratford, England. The method of treating grain in the manufacture of glucose, which consists in macerating with dilute acid, drawing off the unabsorbed acid, macerating the material with clean water, again macerating in dilute acid, and then drawing off all unabsorbed acid preparatory to treatment in a converter.

186,938. **Glass Bottles.**—Wm. C. King, Union Township, Allegheny County, assignor to King, Son & Co.,

No. 186,938.

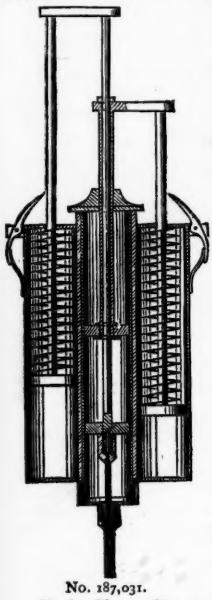
Pittsburgh, Pa. A glass bottle, the mouth of which has a series of crimps, four or more in number, at regular intervals.

186,940. **Evaporating-Pans.**—James T. Lockey, Northwich, England.

186,951. **Processes for Refining Crude Ozokerite.**—C. M. Pielsticker, London, England. The process of refining crude ozokerite by melting in an agitator, then adding sulphuric acid, agitating, and, when a drawn sample, freed from impurities, presents a yellow color, drawing off the impurities and washing the ozokerite repeatedly with hot water, allowing it again to settle,

and then agitating with carbonate of baryta and caustic soda; when sufficiently agitated drawing off the spent chemicals, and adding to the ozokerite a saponifiable oil or fat, rosin, turpentine, or soap, and caustic soda, agitating, allowing to settle, drawing off impurities, washing repeatedly in hot water, allowing to rest, and when the ozokerite is of a light yellow color, filtering it through animal charcoal, so as to obtain a whitish wax-like material, suitable for similar purposes for which beeswax, paraffine, and stearine are now in use.

187,031. **Hypodermic Syringes.**—J. McMorries, Newberry, S. C. Two spring pistons are simultaneously operated upon releasing two spring pawls. One piston carries the hollow needle, and the other injects the medicated liquid.



No. 187,031.

187,079. **Compositions for Preserving Food.**—C. G. Am Ende, Hoboken, N. J. A composition of boracic and acetic acid.

187,105. **Galvanic Soles.**—E. H. Craw, Vallejo, Cal. Assignor of one-half his right to W. W. Vanderbilt.

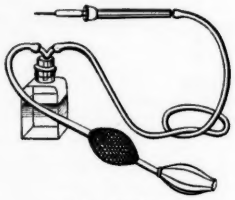
187,155. **Explosive Compounds.**—S. J. Mackie, Camille A. Faure, and G. French, Faversham, England. An explosive compound consisting of a mixture substantially in the proportions specified of nitre, cellulose, reduced to an impalpable powder, nitrate of baryta, and saltpetre.

Reissued.

7,501. **Wire Fastenings for Bottle-Stoppers.**—H. W. Yerington, Oceanic, N. J., assignor to R. C. Anthony, New York City. Patent No. 162,451, dated April 20, 1875.

Patents granted February 13, 1877.

187,245. **Soap Compositions.**—J. W. Bartlett, Moline, Ill., assignor to himself and M. Witherell, same place. A machine-soap, formed of rain-water, pulverized lime, soap-stone, carbonate of potash, chloride of lime, concentrated lye, golden machine-oil, cotton-seed oil, lard-oil, and melted lard.



No. 187,301.

187,250. **Manufacture of Malt-Syrups or Extracts.**—O. F. Boomer, and H. R. Randall, Brooklyn, N. Y. In the manufacture of malt-syrup or extract, the treatment of the grain or other starch-bearing substance, previously ground or mechanically reduced to a suitable degree of fineness with an alkaline solution.

187,279. **Machines for Cutting off Gelatine Capsules.**—F. A. Hubel, Detroit, Mich. A series of cog-wheels, operated by a crank, has a series of pendent spring-arms, which carry rotating cutting-disks. By a movement of the crank the disks are carried around the closed tube which forms the capsule, thus evenly cutting off all at a determined point.

187,286. **Ventilating Faucets.**—Ole H. Larson, Fort Dodge, Iowa.

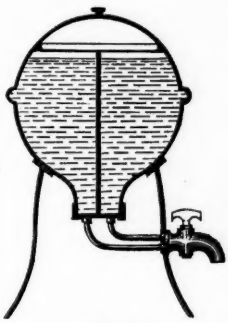
187,301. **Cauterizing Apparatus.**—C. A. Paquelin, Paris, France. The combustion of a hydrocarbon is used to heat a cauterizing-iron of tubular form, and both ends of the combustion tube terminate within an outer sheath.

187,302. **Machines for Triturating and Polishing Metallic Powders.**—D. D. Parmelee, New York, assignor to A. W. Billings, Brooklyn, N. Y.

187,303. **Manufacture of Metallic Paints and Powders.**—D. D. Parmelee, New York, assignor to A. W. Billings, Brooklyn, N. Y.

187,310. **Voltaic Plasters.**—W. B. Potter, Boston, Mass. The improved voltaic plaster having the voltaic plates secured to the back of the plaster, and holes cut through the plaster, above the plates, as and for the purpose specified; so that, when in use, the plaster shall lie between the plates and the skin.

187,313. **Processes of Manufacturing Malt Extract.**—H. R. Randall, Brooklyn, N. Y. The processes of manufacturing malt extract from raw or unmalted grain, or starch-bearing material of brewers' use, the same comprising the successive steps of first eliminating the starch from the starch-bearing material by subjecting ground grain to the mashing process at a high temperature, about 180° Fahrenheit, and of subsequently subjecting such eliminated starch to the action of malt at a lower temperature, of about 160°, substantially as described.



187,357.

187,327. **Processes of Treating Fats.**—A. Springer, Cincinnati, Ohio. The process of producing edible fat or tallow by heating the crude fat at a temperature of about 140° to 145° Fahrenheit, in contact with common salt, saltpetre, borax, and boracic and salicylic acids, withdrawing the separated fat and incorporating therewith a second and smaller charge of the above chemicals, with the addition of benzoic acid, in the manner set forth.

187,354. **Refrigerating Apparatus.**—F. P. E. Carre and E. Jullien, Paris, France.

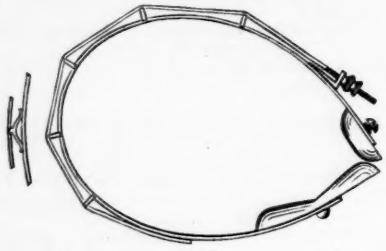
187,357. **Apparatus for the Manufacture of Mineral Water.**—E. Cornelis, New York, assignor to himself and J. M. Elliott, same place. The combination with a vessel divided into two parts by a vertical partition of two pipes attached to the bottom of said vessel, communicating with the chambers in the opposite sides of partition, and terminating in a two-way cock.

187,413. **Processes for Producing Artificial Cold by Means of Anhydrous Sulphurous Oxide.**—R. P. Pictet, Geneva, Switzerland.

187,446. **Soda Water Apparatus.**—O. Zwietush, Milwaukee, Wis.

187,428. **Trusses.**—John W. Sutton, New York, N. Y. Brief. A supplemental spring-brace over the usual

spring body-band serves, as it is shortened or lengthened, to add to or take from the pressure of the pad.



187,428.

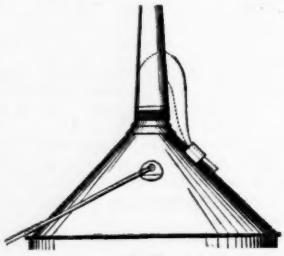
Patents granted February 20, 1877.

187,468. **Apparatus for Extracting Tannin.**—Thos. W. Johnson, New York, assignor to H. C. Johnson, Astoria, N. Y. Water is admitted to the leaches from tank above, through a rotary sprinkler that may be raised or lowered according to the depth of material in the leaches, while steam enters through foraminous columns and jacket; the solution of tannin passes by its own gravity to settling-tanks, where the sediment is deposited upon a series of platforms, one above another, having glass tubes projecting upwards outside the tank to show the depth of sediment deposited. The clear liquor next runs into the highest of a series of semi-cylindrical evaporating-tanks, having steam-pipes coiled in the bottom through the series, and from the lowermost one into cooling-tanks under the evaporators. The condensers are provided with a number of revolving disks upon a horizontal shaft, upon which hot air is forced from a perforated pipe.

187,478. **Vents for Barrels, etc.**—G. W. Moore, Auburn, N. Y.

187,550. **Strainer-Cups.**—Jacob W. Oberholtzer, Hiawatha, Kans.

187,561. **Flexible Can-Spouts.**—Wm. R. Rightor, Helena, Ark. The combination of a flexible spout and a keeper, with the top of a can, to adapt said spout to serve as a spout and as a stopper. Substantially as shown.



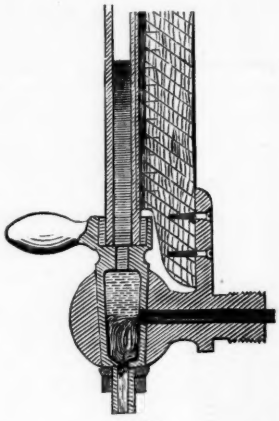
187,561.

187,603. **Artificial Legs.**—Jas. Dawes, Rochester, N.Y. (filed Jan. 22, 1877).

187,623. **Measuring-Faucets.**—Francis H. Hambleton, Md. A flow-rate indicator for liquids, consisting essentially of a chamber having three openings—one connecting with the source of supply, one with a discharge nozzle, and one with a stand-pipe—for showing the head and thereby indicating the rate of flow.

187,625. **Speculums.**—Evans B. Harding, Northampton, Mass. The rear ends of the blades, as well as the forward, are expanded by means of a thumb-screw, lever, and rack-bar. The rear ends are united by a slot and pins.

187,644. **Compositions for Preserving Animal and Vegetable Matter.**—J. K. Korhessen, Allegheny, Pa. A compound for preserving animal and vegetable matter, consisting of calcined alum, sugar, nitre, sal-soda, salt, and water.



187,623.

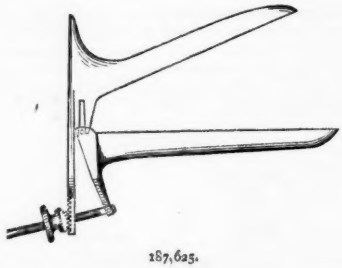
Patents granted February 27, 1877.

187,717. **Machines for Applying Powder for the Destruction of Insects.**—Park Kitchell, Whippany, N. Y.

187,747. **Saccharine-Composition Syrups.**—H. B. Blackwell, Boston, Mass. The artificial saccharine syrup or composition, consisting of glucose in the form of an uncrystallized or an uncrystallizable syrup, or of a syrup not readily crystallized, sucrose and water.

187,777. **Invalid Bedsteads.**—Jno. Q. A. Sargent, Manchester, N. H.

187,802. **Disinfecting Compounds.**—E. John M. Becker, New York. A disinfecting composition, consisting of maple sugar and of the oils and extracts of pine-needles and juniper berries.



187,625.

187,823. **Indicators.**—C. C. Curtiss and J. Curtiss, Chicago, Ill. An office-dial.

187,865. **Fluid Meats.**—Jno. L. Johnston, Sherbrooke, Quebec, Canada. A compound consisting of lean flesh and albumen, in the form of a dry powder, and the well-known gelatined meat essence.

187,881. **Apparatus and Processes for Manufacturing Purified Saccharine Solutions.**—A. Maubre, Penge, England.

187,930. **Processes of Preserving Meat.**—Wm. Stone, Boston, Mass., assignor to himself and Wm. Taylor, same place. Consists in first treating meat with chloride of sodium, or such and nitrate of potassium, and next subjecting it to the action of steam and malt, and finally to that of malt alone.

PRESCRIPTIONS AND FORMULÆ.

Cosmoline Cream. (E. J. Davidson, in *Am. Jour. Phar.*)

Cosmolin	24 troy ounces.
White wax, Spermaceti, āā	12 troy ounces.
Glycerine	3 fluid ounces.
Oil of rose geranium	1 fluid drachm.

Melt the wax and spermaceti, add the cosmolin; then stir until nearly cold; add the glycerine and oil, and stir until cold.

Mistura Antispasmodica (Potion antispasmodique opiacée), *concentrated.*

℞. Spiritus menthæ pip	1 gm.
Alcoholis	6 gm.
Vini opii	10 gm.
Aetheris	30 gm.

M. Ten drops of this mixture, added to a tablespoonful of water, represent 15 grammes, or one tablespoonful of the ordinary antispasmodic mixture. The concentrated solution is proposed for the purpose of facilitating a supply to be carried in the pocket.

Elixir of Monobromated Camphor. (Munday.)

Monobromated camphor	3 parts.
Alcohol 90%	120 "
Orange-flower water	80 "
Glycerine	100 "

Mix the alcohol and glycerine, dissolve the monobromated camphor by the use of a gentle heat, and add the orange-flower water. This solution contains 1% of monobromated camphor, being double the strength of that previously given in our February number, p. 62.

Effervescing Carbonate of Iron. (Dr. T. Skinner.)

Tartaric acid	24 parts.
Sodium bicarb	40 "
Iron sulphate (proto)	10 "
Sugar, powd	14 "
Citric acid	2 "

Mix the finely powdered dry materials as follows: First, the sulphate of iron with the sugar and part of the tartaric acid; secondly, the citric acid with the remainder of the tartaric acid and the bicarbonate. Stir the two mixtures together, and unite by sifting. Finally, granulate in open metal vessel over a water-bath. (*The Pharmacist.*)

Emollient Glycerine Lotion.

Take of mucilage of quince seeds, 1 fluid ounce; glycerine, 1 fluid ounce; orange-flower water, 6 fluid ounces. Make a lotion. (*The Pharm.*)

Podophyllin Pills. ("Castor Oil Pills.")

Resin. podophylli	gr. iii.
Extr. hyoscyami	gr. iii.
Saponis	gr. ivss.
Syrupi	gtt. vi.

M. Make 12 pills.

Standard Formulæ for certain new Preparations.

THE Société de Pharmacie of Paris some time ago appointed a commission, consisting of Messrs. Schaeufèle (president), Baudrimont, Gobley, Marais, and Petit (reporter), to prepare standard formulæ for certain new preparations, from whose report we select the following:

1. *Salicylic Acid*, $C_7H_6O_3$. A concentrated solution of commercial caustic soda is exactly neutralized with crystallized phenol, the liquid is evaporated in an iron kettle, and constantly stirred, until a pulverulent mass remains. This is sodium phenate, which is very hygroscopic, and must be kept, unless used immediately, in hermetically sealed vessels. This salt is introduced into a tubulated glass retort placed into an oil-bath, and as soon as the temperature has reached 100° C., a current of dry carbonic acid gas is passed through the contents of the retort. The temperature is gradually allowed during 3 or 4 hours to rise to 180° C. It requires some time before phenol begins to distil over, which is obtained in considerable quantity. Finally, the heat is raised to 220° C., and lastly to 250° C. The operation is finished as soon as the current of carbonic acid gas, at this temperature, carries over no more traces of phenol. The retort then contains only brown basic sodium salicylate. This is dissolved in water, and decomposed by hydrochloric acid. The crude salicylic acid is transferred to a filter, drained and washed, and once or twice recrystallized from boiling water. It may be obtained very pure by sublimation in brilliant needles.*

2. *Thymic Acid*, $C_{10}H_{14}O$. Add an aqueous solution of potassa or soda (1 : 10) to oil of thyme, and agitate repeatedly to facilitate combination. Thymic acid or thymol enters into solution, while thymene, the accompanying hydrocarbon, remains unacted upon. The solution is filtered and treated with an acid, hydrochloric acid for instance, which liberates the thymic acid. The crude acid is washed with water, and, after drying, distilled. Thymic acid thus prepared is liquid, but it may be obtained crystalline by exposing oil of thyme for some time to the cold. It is but little soluble in water, but very soluble in alcohol. It is strongly caustic.

3. *Crystallized Aconitine*, $C_{37}H_{40}NO_{10}$. Exhaust the powdered root of *Aconitum ferox* with concentrated alcohol, to which $\frac{1}{100}$ part of tartaric acid has been added. The solution is distilled at a moderate heat, out of contact with air, to recover the alcohol. The residue is taken up by water, which leaves all fatty or resinous substances behind. The watery solution, which contains the aconitine as tartrate, is shaken with ether, which removes coloring matters, then mixed with alkaline bicarbonate, until effervescence ceases, whereby the alkaloid is set free. The solution is again shaken with ether, which dissolves out the alkaloid, and leaves the latter behind on evaporation. To obtain it in crystals, some petroleum-ether should be added to the ethereal solution. It forms colorless or hexagonal rhombic tables, soluble in alcohol, benzine, and chloroform; insoluble in petroleum-oils and glycerine.

4. *Ammonium Bromide*, NH_4Br. Bromine is added very slowly to water of ammonia, under constant stirring, and until the liquid shows a faint excess of bromine. A few drops of ammonia are then added to overcome this excess, and the solution is evaporated to the point of crystallization. The salt appears in long colorless prisms, volatile without decomposition, and very soluble in water. Its watery solution must not become colored on addition of a few drops of concentrated hydrochloric acid, and on adding to it a small quantity of starch-paste and slightly yellowish nitric acid, no blue or violet color must make its appearance.

5. *Apomorphia*, $C_{17}H_{17}NO_2$. Introduce 1 part of pure morphia and 20 parts of pure hydrochloric acid into a strong glass tube, closed at one end, and capable of holding at least 15 times the quantity. Close the open end of the tube by fusion, and insert it into a cast-iron tube closed (at one end) with a screw plug. Place the whole apparatus into an oil-bath, and heat for 3 hours to between 140 and 150° C. After cooling, the tube may be opened without risk, for there is no pressure of gas inside. The solution is poured out, diluted with water, neutralized with sodium bicarbonate, and, finally, an excess of this salt added, which throws down apomorphia and any remaining unaltered morphia. The supernatant liquid having been decanted, the precipitate is taken up or exhausted by ether or chloroform, which only dissolve the apomorphia. To the ethereal or chloroformic solution enough hydrochloric acid is added

* Complaints have been made of the sublimed acid being not sufficiently pure. Dialysed salicylic acid has been placed upon the market by E. Schering, and is no doubt the purest form in which it can be used. See NEW REM., v., 329.

to neutralize the base, which separates now from the solution spontaneously and settles upon the walls of the vessel. These crystals are rapidly washed with cold water, and purified by crystallization from boiling water. The pure alkaloid may be obtained by precipitating the solution of the muriate with sodium bicarbonate; a white precipitate is obtained, which rapidly turns green in the air. It must be quickly washed and dried. Its solution soon turns green and spoils, but sugar or exclusion of air prevent the change.

6. *Tneine* or *Caffeine*, $C_8H_{10}N_4O_2,H_2O$. Exhaust good green or black tea with boiling water to obtain a concentrated solution, which is precipitated by a slight excess of basic lead acetate. Add to the magma a small quantity of ammonia, filter and separate the excess of lead in the liquid by a current of sulphydric acid gas. Filter again, and evaporate slowly. On cooling an abundant crop of nearly pure crystals of caffeine is deposited. The mother-liquor yields more crystals on further evaporation.

7. *Bibasic Calcium Phosphate*, $CaHPO_4,3H_2O$. Dissolve 608 parts of crystallized calcium chloride in 1,000 parts of distilled water, and add to it gradually a solution of 1,000 parts of crystallized sodium phosphate in 10,000 parts of water. Let the precipitate subside, wash five or six times by decantation, with about 10,000 parts of water each time. Transfer the magma to a muslin-strainer, and allow it to drain. As soon as its consistence permits, cut it into pieces, which should be exposed to the air upon blotting-paper. It dries rapidly by spontaneous evaporation, and forms a very white and light salt.

8. *Syrup of Calcium Chlorhydrophosphate.*

Calcium phosphate, bibasic	12.5	parts.
Chlorhydric acid, pure (only just enough, or about)	8	"
Distilled water	340	"
White sugar, in coarse powder	630	"
Essence of lemons	10	"

Mix the calcium phosphate intimately with the water, add the chlorhydric acid in just sufficient quantity to dissolve the lime-salt, then add the sugar, and dissolve cold, or with a *very* gentle heat. Filter, and add the essence of lemons to the cold syrup.

9. *Syrup of Calcium Lactophosphate.*

Calcium phosphate, bibasic	12.5	parts.
Lactic acid, concentrated (only just enough, or about)	14	"
Distilled water	340	"
White sugar, in coarse powder	630	"
Essence of lemons	10	"

Mix the calcium phosphate intimately with the water, add the lactic acid in just sufficient quantity to dissolve the lime-salt, then add the sugar, and dissolve cold or with a *very* gentle heat.

10. *Syrup of Acid Calcium Phosphate.* This is prepared exactly like the preceding two syrups, substituting a sufficient quantity of medicinal phosphoric acid, spec. grav. 1.45, or about 18 grammes.

11. *Glycerole of Calcium Saccharate.*

Burnt lime, clean and white	80	gm.
Sugar, powdered	160	"
Glycerine	160	"
Water, q.s. to make	1	litre.

To the lime and sugar add gradually, and in small portions, 700 grammes of water. After 24 hours of contact, filter, add the glycerine and sufficient water to make 1 litre. This glycerole is used for preparing the following:

12. *Liniment of Calcium Saccharate.*

Olive oil	200	parts.
Glycerole of calcium saccharate	100	"

Mix.—*Répert. de Pharm.*, 1877, No. 2, 3.

Solution of Bromide of Arsenic. (R., Richmond, Ind.)—The manner of preparing pure bromide of arsenic, its properties and composition, has been given in our last volume (1876, pg. 350). The peculiar solution, however, which goes by the above name, is that introduced many years ago by Dr. Clemens, of Frankfort on the Main, and which *Dorvault*, in his *Officine*, calls "Liqueur Clémens," or "Liqueur à l'arsenite de bromure de potassium." It is intended as a substitute for Fowler's solution. Its formula is as follows:

Arsenious acid	1 part	by weight.
Potassium carbonate	1 part	
Bromine	2 parts	
Distilled water, to make	93 parts	

Boil the carbonate and the acid with most of the water, until they are dissolved; when cold, add the bromine and enough water to make up the bulk to 93 parts.

Age is supposed to improve this mixture, as the bromine gradually enters into combination. The dose of the solution is from 1 to 4 drops in water, once or twice daily.

Analysis of Ridge's Food.—The *Medical Examiner* gives the following analysis of Dr. Ridge's Food:

Moisture	9.31
Oil (fat)	.92
Nitrogenous (or flesh-forming) matter	5.25
Starch, sugar, and digestible fibre	83.63
Cellulose	traces
Ash	.89
	100.00

Ammoniated Tincture of Guaiacum in Inflamed Throats.

DR. GARNER recommended some time since (*Canada Lancet*, July, 1876) the employment of ammoniated tincture of guaiacum in inflammation of the throat whether acute or chronic. The remedy, he says, seems to be totally unknown to some practitioners, and wholly ignored by others. He uses the remedy with almost invariable success in cases of chronic hoarseness, employing it in the form of a gargle. In the first stage of quinsy its action is astonishing. In cases of inflamed tonsils or sore throat, when produced by, or accompanying measles, scarlatina, cynanche, parotiditis, and croup, he uses the pure tincture by means of a sponge-probang. His formula for a gargle is as follows:

Gargle for Sore Throat.

℞. Tinct. guaiaci ammon	ʒ iij.	
Liquor. potassæ	ʒ iij.	
Tinct. opii	ʒ ij.	
Aq. cinnamomi	ad. f.	ʒ viij.

How to Cure a Bad Cold.

WHARTON (*Virgin. Med. Monthly*) recommends carbonate of ammonia in full and often repeated doses: 10 grains, in mucilage, every hour or two hours, for one or two days in severe cases. With proper attention to other hygienic means the patient will soon recover from the severest cold without the liability to relapse which follows the employment of sweating medicines.

Digestive Pastilles of Borivent.

Bismuth subnitrate	20	parts.
Calcium phosphate	30	"
Sodium bicarbonate	10	"
Magnesium carbonate	200	"
Iron carbonate	50	"
Sugar	1000	"

Flavor with essence of peppermint, anise, or orange-flowers. Make into pastilles of 1 gramme each, of which 3 to 12 may be taken daily.

"Sulphur Pills."

Potassii sulphureti,	
Pulveris jalapæ,	
Saponis	āā ʒ i.
Extr. taraxaci	q.s.

Make 120 pills.

Dr. J. T. Rothrock has been elected to the chair of Professor of Botany in the Auxiliary Faculty of Medicine of the University of Pennsylvania, the vacancy occurring by the election of Dr. H. C. Wood to the chair of Materia Medica.

ITEMS.

College of Pharmacy of the City of New York.—The annual meeting of the members of the College was held on Thursday, March 15th, at which the new officers for the ensuing year were elected. The roll of members includes at present 44 life, 16 honorary, and 189 contributing members, being a total of 249. The total number of students who attended the lectures and laboratory was 205, being in excess of the previous year. The Board of Pharmacy reported that they had held 80 examinations, of which 53 were first examinations (resulting in 29 rejections); 18 were second examinations (with 8 rejections); 4 were third examinations (with 3 rejections); and 5 were fourth examinations (with 2 rejections). Of the 80 applicants, 17 were proprietors, and 63 were assistants. Nine proprietors and 33 assistants failed to pass. At the first meeting of the new Board of Trustees, held on April 5th, the list of officers was completed by the appointment of the standing committees:

President: Ewen McIntyre.

Vice-Presidents: Henry J. Menninger, Wm. M. Olliffe, Dav. Hays.

Treasurer: Theob. Frohwein.

Secretary: Henry A. Cassebeer, Jr.

Trustees: Paul Balluff, Gust. Balser, Geo. C. Close, Fred. Hoffmann, Wm. Neergaard, M. L. M. Peixotto, Gust. Ramsperger, Chas. Rice, John W. Shedden, Ad. Tscheppe, Aug. W. Weismann.

Committee on Pharmacopœia: P. W. Bedford, Paul Balluff, Chas. Rice.

Delegates to Amer. Pharm. Assoc.: Fred. Hoffmann, Chas. Rice, M. L. M. Peixotto, H. J. Menninger, Ad. Tscheppe.

Library Committee: Chas. Rice, Gust. Balser, Ad. Tscheppe.

Lecture Committee: Paul Balluff, M. L. M. Peixotto, Fred. Hoffmann, John W. Shedden, Chas. Rice.

Curators: Gust. Ramsperger, Gust. Balser, Chas. Rice.

Property Committee: Wm. M. Olliffe, Wm. Neergaard, Theob. Frohwein, H. A. Cassebeer, Jr., Aug. W. Weismann.

Examination Committee: Chas. Rice, H. J. Menninger, M. L. M. Peixotto, Gust. Ramsperger, Aug. W. Weismann.

The name of F. W. Henry has been omitted by an oversight from the list of the graduates of this College, printed in our last number. We also take pleasure in placing here the names of those graduates of the class of 1876–'77, in the order of merit, who particularly distinguished themselves in their examination: First prize, gold medal, Francis B. Wells; second prize, silver medal, Ernest Montanus, Jr.; Third prize, bronze medal, Edw. V. Zoeller. Honorably mentioned: R. L. Iler, F. M. Corwin, G. T. Schoenchen, W. D. Colby, M. J. Breitenbach, W. Hebig, J. Teschner, K. J. Egge, E. F. Leister, E. A. Stahl, W. S. Getty, A. L. Avery, C. J. Lawler, F. H. Nowill, H. Kopf.

Renewed attention is directed to the summer course in laboratory practice, practical pharmacy, and botany. To judge from the number of applicants, these classes promise to be much larger than in former years.

We are requested to notify all the members of the College that an invitation has been extended to them by Dr. John C. Peters, President of the Medical Society of the County of New York, to be present at, and take part in, a discussion on the "Revision of the Pharmacopœia," which is to take place on Monday, April 23d, at 8 P.M., in the lecture-room of the College of Physicians and Surgeons.

At the next College meeting, on June 21st, it is proposed to discuss the same subject, so that an expression of the sense of the members be arrived at. Due notice will be given in our next number.

Medicine Cups.—Messrs. S. Manson & Thompson are manufacturing small earthenware cups of various sizes, having bevelled rims, and being made to contain accurate quantities when filled to the inner edge. They are furnished at so small a price as to enable them to be given away by the apothecary as a means for administering the exact dose prescribed to be taken of any mixture.

The Philadelphia College of Pharmacy.—At the annual meeting of the Philadelphia College of Pharmacy, held on Monday, the 26th of March, the following officers were elected:

President, Dillwyn Parrish; *First Vice-President,* Charles Bullock; *Second Vice-President,* Robt. Shoemaker; *Treasurer,* Samuel S. Bunting; *Recording Secretary,* William J. Jenks; *Corresponding Secretary,* Alfred B. Taylor; *Board of Trustees* (eight members elected at this meeting): Robert Bridges, M.D., John M. Maisch, Daniel S. Jones, Thomas S. Wiegand, James T. Shinn, T. Morris Perot, William B. Webb, Joseph P. Remington; *Publication Committee:* John M. Maisch, H. N. Rittenhouse, Thomas S. Wiegand, James T. Shinn, Charles Bullock; *Sinking Fund Committee:* Thomas S. Wiegand, T. Morris Perot, James T. Shinn; *Editor,* John M. Maisch; *Librarian,* Thomas S. Wiegand; *Curator,* Joseph P. Remington.

A Prize of one hundred dollars, to be called the Priestly Prize, in honor of the great chemical discoverer, has been instituted in the School of Chemistry of the Stevens Institute of Technology, and is to be awarded to the student who has excelled in the performance of chemical work, or in the pursuit of original investigation.

The Maine Pharmacy Law.—A pharmacy law in Maine has been recently passed, and received the sanction of the Governor, February the 9th. According to its provisions, the Governor has to appoint three suitable persons to be Commissioners of Pharmacy, who are to examine every applicant desiring to engage in the business of apothecary; said applicant must have been employed in an apothecary store where physicians' prescriptions are compounded, at least three years, or must have graduated from some regularly established Medical School or College of Pharmacy, and be competent for the business. The act does not apply to physicians putting up their own prescriptions, or to the sale of proprietary medicines.

Penny's Receipt for the Cure of Hydrophobia.—Some of the older residents in Orange, Ulster, and Sullivan Counties, may yet remember an old man named James Penny, a sort of itinerant or "Indian" doctor, whose specialty was the cure of hydrophobia. He is long since dead, and by many has been quite forgotten; but a physician, whose grandmother's home was the last shelter of the old man, has lately discovered among a number of things which he left behind him, the receipt for his "cure." The prescription, a sample of which has been given us, was handsomely engraved by Lowe, of 146 Broadway, N. Y., and bears the address and date, Frantzdale, Ulster, April 28, 1837. It is in shape like a bank note, and is printed on bank-note paper. A circular design in the centre of the upper margin represents Hercules, armed with an axe, attacking a beast which bears some resemblance to a dog, the latter being evidently the work of a more modern artist than the figure of the mythological deity. The general appearance of the formula is very handsome, but the text, on close examination, is more curious than elegant, and reads as follows:

"Take two upper & one under Oyster Shells well freshened & burnt to a Lime, Roach alum well burnt, Bolarmenia or draggons Blood pulverized, taken in midling good White Wine. Beer. or Ale. the Alicompain root must be dryed made fine, the shell Lime & Alicompain must be ½ the most, the other two articles half and half all well mixed together and KEPT *in a* GLASS JAR AIR TIGHT. Take for Man or Beast weighing 160 lbs and so in proportion to any heft ONE COMMON TABLE SPOONFULL mixed early in the morning immediately after being bit, in White Wine, Beer, or Ale, fasting four hours & Neither Eat nor drink & put some of the medicine on the wound mixed in some grease and bind it on tight and so on for two mornings running. and the Fourth morning take the Third dose fasting each time as above and ardent Spirits must not be drank for three months after. James Penny.

A Botanical Exhibition.—In connection with the grand International Exhibition of Horticulture, to open at Amsterdam on April 12th, and which is expected to be one of the most complete ever held, it is proposed to have a supplementary exhibition of industrial products of vegetable origin, with special classes, amongst others for rhubarb, cinchona barks, sarsaparilla, vegetable oils, etc. A congress of botanists, horticulturists, manufacturers, and dealers in such products is to be held at the same time. Among the questions standing for discussion are the following: "What is the best method of harvesting cinchona bark, and does practical experience indicate the expediency of adopting different methods with different species of cinchona?"

German Chemical Society.—At the annual meeting of the German Chemical Society, held at Berlin, December 22d, the following officers were elected for the year 1877: President, Prof. F. Wöhler; Vice-presidents, Professors Kekulé, Baeyer, Hofmann, and Liebermann. The retiring president (Professor Hofmann) stated in his annual report that the present number of members was 1,598, showing an increase of 225 during the past year, and that 423 original scientific communications had been presented before the society during this time. The *Berichte* for 1876 form a volume of about 2,000 pages.

Solvent for Silk.—According to Julius Löwe, the following mixture forms a good menstruum for dissolving silk: 16 gm. cupric sulphate are dissolved in 140 to 160 gm. of distilled water, and 8 to 10 gm. of pure glycerine, of spec. grav. 1.240, are added, after which soda-solution is dropped in, until the light-blue precipitate, which is formed at first, is again dissolved. The resulting liquid must be preserved, unfiltered, in a well-closed bottle, and when using it, the clear portion is poured off. This liquid dissolves silk without difficulty, forming a more or less viscous solution. On addition of hydrochloric acid, a white jelly separates. Wool, cotton and linen fibres are not attacked by this liquid, which may therefore be used to separate silk from other textile fabrics.

The Kings County Pharmaceutical Association held a meeting on Tuesday, the 10th inst., at which the revision of the Pharmacopœia was under discussion. The shortcomings of the present work were freely canvassed, and the plan of Dr. Squibb, for its improvement, received very general endorsement.

Hospital Out-Patient Reform.—The *Pharm. J. and Trans.* states that the authorities of King's College Hospital have inaugurated a system which acquires increased importance from the numerous cases of poisoning by misadventure heretofore reported. In the out-patient department of this hospital all liquid medicines intended for external use are now supplied in *blue glass poison-bottles* only. Patients not having these bottles are required to pay for them, cost price being charged for all the sizes which are most frequently in use. The system has had a fair trial and has been found to work successfully. It is thought that by "educating" the hospital patient to the use of a special bottle for all remedies not intended to be taken internally, an additional means of safety will be provided. The bottle to which preference has been given is the so-called "Fluted Poison," introduced by Toogood as specially applicable to external remedies, and now very generally in use among pharmacists.

Such bottles are also manufactured in this country, but the tint of the glass is occasionally too dark to admit of their contents being seen or examined.

Non-poisonous Vegetable Fly-paper.—Powdered *black pepper* is mixed with syrup to a thick paste, which is spread by means of a broad brush upon coarse blotting-paper. Common brown syrup will answer, but syrup made from sugar is preferable, as it dries quicker. For use, a piece of this paper is laid upon a plate and dampened with water. The paper may also be made directly at the mill by adding sugar to the pulp and afterwards ¼ to ½ of powdered black pepper, and rapidly working it into a porous absorbent paper.

Asbestos is found in large quantities in Pennsylvania, Virginia, Maryland, and parts of Canada, though it is said to be inferior in quality to that which comes from the shores of the Mediterannean Sea. This substance was first discovered in Corsica and Italy, and was employed by the ancients for a variety of purposes, prominent among which was its use in the form of a paper as a wrapping for the dead. They also made a felting of it by combining it with woody fibre and then destroying the latter by fire. The manner in which this was done is now unknown

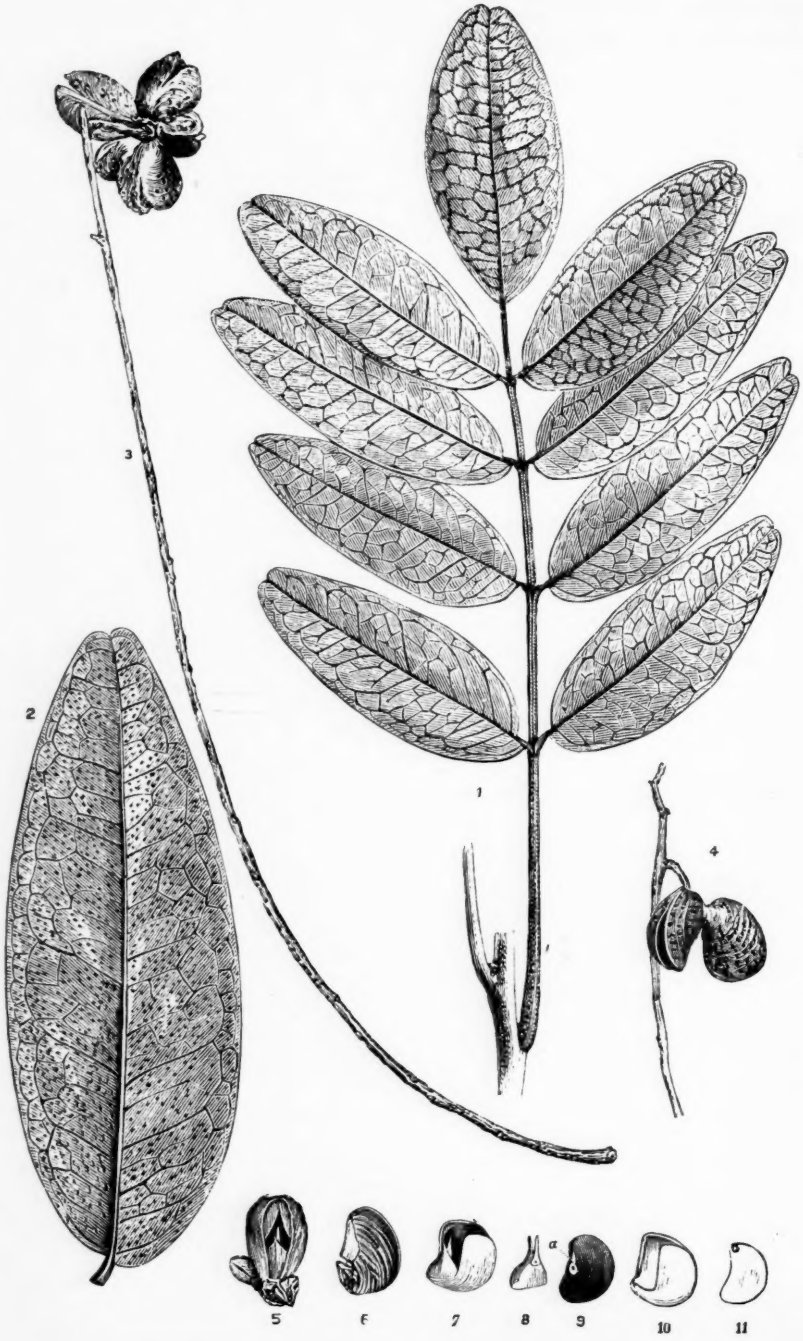
Pharmacy in New South Wales.—An Act to restrict the use and sale of poisons in the province of New South Wales, came into force on September 1. In accordance with the 9th section, the Governor, with the advice of the Executive Council, has for the purposes of the act, appointed a Board of Pharmacy, consisting of the President of the New South Wales Medical Board, the Medical Adviser of the Government, and the Council of the Pharmaceutical Society of New South Wales.

Dr. John S. Newton has been elected Professor of Materia Medica, Therapeutics, and Botany in the Pennsylvania College of Pharmacy. He is a graduate of the Jefferson Medical College, and was formerly Professor of Chemistry in the Central High School.

Fashionable Medicines.—In the *Archives Générales de Médecine*, for January, M. M. Lasègue and Reynauld give the following statistics respecting some modern drugs supplied by the medical men of the Assistance Publique. In 1869 the Central Pharmacy distributed 141 kilogr. of chloroform against 308 kilogr. in 1875. Chloral showed a still more rapid increase. In 1869 only 5 kilogr. were required, whilst in 1875 360½ were consumed. Iodoform, from 250 grm. in 1859, rose to 28 kilogr. in 1875; bromide of potassium rose from about 3 kilogr. in 1855 to nearly 800 kilogr. in 1875; opium showed but small variations, but the same cannot be said of morphia, no doubt from the general use of hypodermic injections, for from 275 grms. in 1875 the amount rose to the enormous quantity of more than 10,000 grms. A very large augmentation was also seen in the alcohol used in the hospitals and infirmaries of Paris. Thus, in 1855, the Assistance Publique only appropriated 1,270 litres of alcohol to the use of the sick, whilst in 1875, 37,578 litres were used. The same increase is noticeable in rum and red wine. The use of white wine has sensibly diminished. The use of leeches has nearly gone out of fashion. In 1834 and the following years up to 1837, the number of leeches employed exceeded a million, in 1874 the numbers had fallen to 49,000 only. The consumption of sulphate of quinia is on the increase, and represents 24,525 grms. in 1855 against 53,734 grms. in 1874.

Obituary.—On the 9th inst., William Wood, father of Wm. H. S. Wood, the present head of the firm of Wm. Wood & Co., died suddenly in this city of cardiac disease.

In 1803, Samuel Wood came from England to New York City, and opened a small book-shop at No. 362 Pearl St. In 1822, William became a partner in the firm, then composed of his father and elder brothers, and the erection of a new building on the site of the old shop soon followed. The publication of medical books was undertaken, and, influenced by the taste of the junior member, this gradually outgrew the other branches of the business until, at the time of Mr. Wood's retirement from the firm in 1868, almost all other lines had been abandoned, and the publication of this class of works had become the specialty of the house. In 1856 the business was moved to No. 389 Broadway; again in 1862, to No. 61 Walker St. (where the present head of the firm became a partner), and still later to the present site. His long and familiar acquaintance with most of the leading physicians of the country enabled Mr. Wood to appreciate and sympathize with their views as few persons, not actually engaged in the practice of medicine, can do, and his systematic habits of business, integrity of character, warmth of attachment, and cordiality of manner, won for him the respect and affection of all who knew him.



JABORANDI (*Philocarpus species*).